ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION
EA Number - CA-680-07-17

Allotment Name: Stoddard Mountain

BARSTOW FIELD OFFICE
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CHAPTER 1: INTRODUCTION

A. Summary

The Bureau of Land Management (BLM) proposes to issue a 10-year lease to authorize livestock grazing on the Stoddard Mountain Allotment in accordance with laws and policy described in the Purpose and Need section below. The Stoddard Mountain ephemeral sheep allotment is located approximately two miles south and 10 miles west of Barstow, California. The following is a summary of the current authorization:

Public land acres in allotment: 174,092
Kind of livestock: sheep
Ephemeral or perennial: ephemeral
Plan Area: West Mojave
Current authorized use: not applicable for ephemeral allotments
Acres Critical Habitat: 66,525 (public lands)
DWMA* Acres in allotment: 88,378 (public lands)
Identified for Voluntary Relinquishment: Yes
Request for Grazing Lease Renewal Received: Yes

*Desert Wildlife Management Areas (DWMA) are Areas of Critical Environmental Concern designated in the West Mojave Plan Amendment for the conservation of desert tortoise, and generally correspond to and may expand beyond critical habitat boundaries.

B. Background

The grazing lease for the Stoddard Mountain Allotment (see Map 1) expired at the end of the 1999 grazing year (February 29, 2000). On November, 29, 1999, Congress included language in the 2000 Appropriations legislation (P.L 106-113, Sec. 123) authorizing grazing to continue on expiring leases with their same terms and conditions. The grazing lease for this allotment was renewed under P.L. 106-113 for a period of 10 years and expires in 2010.

Public Law 106-113 requires compliance with all applicable laws and regulations, which include the National Environmental Policy Act of 1969 (NEPA), and the Endangered Species Act of 1973, as amended (ESA).

Subsequently on November 10, 2003, Congress included language in the 2004 Appropriations legislation (P.L. 108-108, Sec 325) to renew grazing leases under the auspices of the Taylor Grazing Act with the terms and conditions of expired leases through FY 2008 or until leases are processed, whichever comes first. Public Law 108-108 requires compliance with all applicable laws and regulations, which include the National Environmental Policy Act of 1969 (NEPA), and the Endangered Species Act of 1973, as amended (ESA). Upon completion of processing, the permit may be cancelled, suspended, or modified, in whole or in part to meet the requirements of applicable laws and regulations.

C. Tiering to Existing Land Use Plan/EIS

The Stoddard Valley ephemeral sheep allotment was designated in the CDCA Plan of 1980. This environmental assessment (EA) is tiered to the West Mojave Plan (WMP), approved in March 2006 and the associated final environmental impact statement (FEIS) of January 2005, and provides site-specific analysis at the allotment level. Tiering helps focus the EA more sharply on the important issues related to grazing on the allotment while relying on WMP analysis for background. Analysis of environmental issues considered and addressed in WMP is incorporated by reference. The site-specific issues analyzed for this allotment, as well as the issues that are incorporated by reference but will not be analyzed in detail, are identified in Chapter 3 of the EA. A summary of the WMP analysis tiered in this EA is as follows:

1) WMP is an amendment to the California Desert Conservation Area (CDCA) Plan of 1980. The WMP was developed expressly to address special status plant and animal species and to establish conservation strategies for those species within the multiple use context required for the CDCA by section 601 of the Federal Land Policy and Management Act of 1976 (FLPMA).

2) As part of the CDCA conservation strategy, BLM has determined which public lands will be available or unavailable for livestock grazing. This strategy included the following changes that limits sheep grazing within the Stoddard Mountain allotment:
   - ♦ modified allotment boundaries to reflect elimination of DWMA acreage;
   - ♦ modified use areas to exclude grazing from designated Mojave Monkeyflower Conservation Areas;
   - ♦ modified allotment boundaries to reflect elimination of grazing within 9 miles of occupied bighorn sheep habitat, unless geographically isolated;
   - ♦ established programmatic management prescriptions including regional land health standards and guidelines for grazing management;
   - ♦ identified restrictions on sheep grazing within high quality habitat of the federally threatened desert tortoise outside of DWMA.

   Three of these modifications eliminated sheep grazing in approximately 21,853 acres of DWMA, 82,681 acres within 9 miles of occupied bighorn sheep habitat, and 10,633 acres of Mojave Monkeyflower habitat respectively on the Stoddard Mountain allotment. Another 66,525 acres of critical habitat that has been subsequently designated as DWMA had been eliminated from grazing in a 1995 Grazing Decision. All of these measures were adopted in March, 2006, when the WMP Record of Decision was signed. This EA analyzes the specific application of the conservation strategy adopted by the WMP and considers alternative means to achieve the purpose and need on this allotment.

3) In addition to designating lands available (or unavailable) for grazing, WMP established programmatic management prescriptions including regional land health standards and guidelines for grazing management; utilization prescriptions for perennial species; restrictions on sheep grazing within habitat of the federally threatened desert tortoise (*Gopherus agassizii*); monitoring requirements; and specific

management prescriptions for Desert Wildlife Management Areas (DWMAs) such as the elimination of ephemeral authorizations and the implementation of an ephemeral forage production threshold of 230 pounds per acre (pages 2-127,128). The EA analyzes the specific application of the programmatic management prescriptions of WMP and considers alternative means to achieve the purpose and need on this allotment.

4) WMP considered a range of alternatives for the public land livestock grazing program at a regional level on the approximately 3.2 million acres of public lands in the WMP planning area. The EA analyzes the range of alternatives for grazing consistent with WMP, including a proposed action and continuation of current management ("no action" alternative). A no grazing alternative addresses elimination of grazing, through (a) regulations; or (b) voluntary relinquishment, and subsequent designation of the allotment as unavailable for grazing.

5) Impacts of livestock grazing are addressed at a regional level in WMP. Analysis addressed the impacts of livestock grazing on a wide range of resource topics, including impacts to air quality, soil, vegetation, wildlife, cultural resources, wilderness, and socioeconomic impacts. This regional analysis is incorporated by reference (WMP FEIS pages 4-4 thru 4-282); general discussion of these impacts is repeated. This EA analysis focuses on the specific environmental issues associated with areas where livestock congregate on the allotment, and habitat of special status species. Discussion of the specific topics analyzed in the EA, as well as other resource topics addressed regionally (but excluded from further analysis in the EA) is contained in Chapter 3.

6) WMP balances conservation with public use, occupancy, and development on a regional level. For example, Areas of Critical Environmental Concern (ACEC) and Desert Wildlife Management Areas (DWMA) are established; routes of travel on public lands are designated as open, closed or limited, and other management prescriptions are provided to guide multiple use management. BLM proposes specific lease terms and conditions to ensure that an appropriate multiple use balance is maintained on this allotment, while providing for resource conservation within the context of the CDCA Plan as amended by WMP and the scope of the Biological Opinion for the California Desert Conservation Area (West Mojave Plan) (1-8-03-F-58, January 9, 2006).

D. Purpose and Need

The purpose of the EA is to complete a site-specific analysis of grazing alternatives on the Stoddard Mountain Allotment which provides information as required by the Bureau of Land Management implementing regulations for the National Environmental Policy Act, Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act, and Public Law 106-113 section 325, in order to determine whether to authorize grazing within this allotment and determine whether changes are necessary to current management of the allotment to assist in the maintenance or improvement of resource conditions including rangeland health.

In addition, BLM may use its authority to close areas of the allotment to grazing use or take other measures to protect resources as needed. Therefore, issuance of a "fully processed" grazing lease with such applicable terms and conditions is necessary to manage the public's use, occupancy, and development of the public lands and prevent unnecessary or undue degradation of the lands (per 43 USC 1732[b]).

The need for the EA is to process an application requesting renewal of the Stoddard Mountain sheep allotment grazing lease. A renewal of grazing under this lease must be in compliance with CDCA Plan, and specifically in compliance with the actions prescribed in the West Mojave Plan, dated March 13, 2006, the associated Biological Opinion of the California Desert Conservation Area (West Mojave Plan), dated January 9, 2006, and the proposed Regional Rangeland Health Standards.

E. Plan Conformance

The proposed action is subject to the California Desert Conservation Area (CDCA) Plan, as amended. The decisions of the CDCA plan that specifically pertain to this proposed action include the CDCA Plan Grazing Element as Amended by the West Mojave Plan (WMP), approved in 2006. The decisions of WMP that specifically pertain to the proposed action (in Chapter 2) include:

> *"BLM will continue to administer existing authorizations and uses and will consider future requests consistent with this ROD. Any new authorizations or use of public land within the West Mojave Desert area must be in conformance with the West Mojave Plan and subject to site-specific analysis. Such authorization and use would be subject to administrative review at the time of issuance of a final BLM decision regarding the authorization or use..."*
>
> *"This ROD approves the Regional Public Land Health Standards and Guidelines to be consistent with the other regional amendments of the CDCA Plan and provide uniform management with respect to grazing, protection of riparian areas, fragile soils and water quality. The regional standards must be submitted to the Secretary of Interior for final approval."*

The No Action Alternative is not currently in conformance with the land use plan. A plan amendment to reverse allotment boundary adjustments made in the WMP that preclude grazing in DWMA, would need to be approved prior to turnout in those areas.

F. Voluntary Relinquishment

The WMP identified the Stoddard Mountain Allotment for voluntarily relinquishment.

Voluntary relinquishment of the grazing lease for this allotment, in combination with designation of the public lands as unavailable for livestock grazing, is a method for achieving conservation goals for special status species adopted by the WMP. BLM's decision to identify this allotment for voluntary relinquishment in the WMP plan amendment and

subsequent designation of the public lands as not available for grazing was based on criteria set forth in the BLM land use planning handbook, H-1601-1, Appendix C.

Voluntary relinquishment and designation of public lands as unavailable for grazing would only occur where BLM has determined that the action will result in direct conservation benefits for special status species as provided in the WMP. A grazing decision on the voluntary relinquishment request, if and when received, will be issued based on the site-specific analysis within this EA and other required procedures of BLM's 4160 regulations. Upon issuance of the final grazing decision, BLM will, without further analysis or notice: not reissue the lease; remove the allotment designation; assume any and all private interest in range improvements located on public lands; and designate the land within the allotment as unavailable for livestock grazing. A separate plan amendment or revision will not be required.

G. Consultation, Cooperation, and Coordination

In May 2003, a draft of WMP was made available for review and comment to all lessees and interested publics, including Native American tribal governments.

On September 30, 2004 BFO issued Proposed Grazing Decisions to the grazing lessees and all interested publics. Action on final decisions was deferred until after release of the WMP and Final EIS. These decisions were never finalized and will be vacated as part of this grazing lease renewal action.

In January 2005 the final EIS for WMP was issued to all lessees and interested publics for their review and comment.

On July 12, 2006, BFO issued a letter to the lessee informing him of the status of the EA and anticipated timeline for completion of the EA decision record, issuance of the proposed and final decision, and a 10-year grazing lease, if approved.

H. Relationship to Statutes, Regulations, and Plans

A site-specific evaluation of the proposed grazing lease renewal is required by BLM implementing regulations for NEPA, FLPMA, grazing regulations found at 43 CFR 4100 et seq. and the WMP Record of Decision. Various other environmental laws are pertinent to analysis of critical elements of the human environment as defined in Council of Environmental Quality (CEQ) and Department of Interior policy, and are addressed within this EA in the context of the analysis of specific elements.

1. State Historic Preservation Office Protocol

In August 2004, the State Director, California Bureau of Land Management, and the California State Historic Preservation Officer (SHPO) addressed the issue of the National Historic Preservation Act of 1966, as amended, Section 106 compliance procedures for processing grazing permit lease renewals for livestock as defined in 43 CFR 4100.0-5. The State Director and the SHPO amended the 2004 State Protocol Agreement between

California Bureau of Land Management and the California SHPO with the 2004 Grazing Amendment, Supplemental Procedures for Livestock Grazing Permit/Lease Renewal (see Attachment 1).

This amendment allows for the renewal of existing grazing permits prior to completing all National Historic Preservation Act compliance needs as long as the 2004 State Protocol direction, the BLM 8100 Series Manual Guidelines, and specific amendment direction for planning, inventory methodology, Tribal and interested party consultation, evaluation, effect, treatment, and monitoring stipulations are followed. The lessee would comply with any future standard protective measures that may be developed for the protection of cultural resources upon further allotment inventory, based on site evaluation and the determination of significance.

2. USFWS Biological Opinions on the California Desert Conservation Area Plan

To comply with the Endangered Species Act, the BLM has consulted with USFWS on livestock grazing in Desert Tortoise habitat within the CDCA several times since the designation of critical habitat in 1994. The most recent of these consultations was completed in January 2006, in conjunction with the WMP (1-8-03-F-58). Under the proposed action, BLM would ensure compliance with the incidental take statement of the 2006 biological opinion on the WMP.

As part of ESA compliance under any lease renewal, BLM would immediately report to the U.S. Fish and Wildlife Service's (USFWS) Ventura Fish and Wildlife Office any injuries or mortality to desert tortoises as a result of grazing. The BLM and USFWS would review the circumstances to determine if any additional protective measures are required. The BLM would compile any instances of take of the desert tortoise due to grazing activities and report annually to the USFWS. If the annual level of take reaches 5 desert tortoises for all the allotments in the West Mojave and Northern and Eastern Mojave planning areas, BLM would meet with USFWS to determine if reinitiation of consultation is necessary on the grazing aspect of the plan.

3. Grazing Prescriptions Contained in the WMP Addressed to BLM

a. If the allotment is not voluntarily relinquished within 24 months of adoption of the plan (i.e., not later than March 2008), it would be scheduled for public land health assessment within 18 months (i.e., not later than September 2009).

b. Per livestock grazing prescription 27 (pages 2-132 and 2-133 of WMP) boundaries of the allotment overlapping the Fremont-Kramer and Ord-Rodman DWMA would be modified to reflect that each DWMA that would no longer be available to sheep grazing. including the entire West Unit and the portion of the East Unit that is east of State Highway 247 (see Map 3).

c. Turnout of sheep in the remaining available Stoddard Mountain allotment (portions of the Middle Unit) would not occur until 230 pounds (air-dry-weight) per acre of ephemeral forage is available. The lessee would be required to remove sheep from the area or the entire allotment if production falls below 230 pounds per acre.

d. The remaining available portion of Stoddard Mountain Allotment is outside of DWMA, but has significant high quality desert tortoise habitat. Grazing use in this allotment would continue until the lessee(s) voluntarily relinquishes the grazing lease.

e. Sheep grazing would be prohibited from the portion of the Middle Unit of the Stoddard Mountain Allotment where it coincides with the Mojave monkeyflower Conservation Area. The BLM would work with the lessee to clearly identify the boundaries of the Mojave Monkeyflower Conservation Area habitat to be avoided.

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

This chapter discusses three alternatives including the proposed action, no action, and no grazing. Monitoring requirements, mitigation measures, and grazing terms and conditions developed in the resolution of issues are incorporated into the proposed action and No Action alternatives, to minimize potential impacts to resources while continuing to provide forage for livestock grazing on portions of the allotment.

A. Proposed Action - West Mojave Plan

The proposed action is issuance of a 10-year fully-processed grazing lease in conformance with CDCA Plan and the WMP Amendment as described parts 1-7 of this section. The intent of the proposed action is to balance environmental protection with continued use of the remaining portions of the allotment for livestock grazing.

1. Public Land Available to Sheep Grazing

The proposed action would authorize sheep grazing on approximately 16,889 acres of public land in the revised Stoddard Mountain allotment (Map 2). The Stoddard Mountain Allotment is comprised of three separate grazing units: West Stoddard, Middle Stoddard, and East Stoddard. The area that would be remain available for ephemeral sheep grazing under the proposed action is located in the Middle Unit of the allotment, within non-critical desert tortoise habitat and outside of the Mojave Monkeyflower Conservation Area.

Under the WMP, ephemeral sheep grazing would be eliminated on the remaining available portions of the West Stoddard Unit, because approximately 98 percent of the public lands within this Unit are within the boundaries of the Fremont-Kramer DWMA. In addition, ephemeral sheep grazing would be eliminated on 31% of the East Stoddard Unit because the public lands east of SR247 are within the Ord-Rodman DWMA. Ephemeral sheep grazing is prohibited in DWMA unless specifically authorized and the WMP identified the DWMA lands in these two Units for elimination from sheep grazing (LG-27, p 2-132).

The Nine-Mile Rule, adopted by the WMP prohibits domestic sheep grazing within nine miles of occupied bighorn sheep habitat, except where topographic features or other barriers minimize physical contact between bighorn sheep and domestic sheep. These WMP changes limit public land potentially available for ephemeral sheep grazing on the Stoddard Mountain Allotment under the proposed action (Table 1) to those areas west of I-15.

The entire East Stoddard Unit also falls within the “Nine-Mile Rule”area that was adopted in the WMP (Mam-3, p. 2-81); therefore sheep grazing would not be authorized in the East Unit (see Map 3). Finally, ephemeral sheep grazing would be prohibited in that portion of the Middle Stoddard Unit where it coincides with the Mojave Monkey Flower Conservation Area (MMFCA) (LG-25, p. 2-32), reducing the available area for ephemeral sheep grazing in the Middle Unit by 31 percent (see Map2).

Table 1: Stoddard Mountain Allotment Proposed Acreage Available for Grazing

Stoddard Mountain Allotment	Total Public Lands	DWMA Acreage Excluded	Acreage Excluded by the 9-Mile Rule	Mojave Monkeyflower Conserv. Area Acreage Excluded	Remaining Acreage Avail. for Grazing
West Unit	63,889	62,863	0	0	1,026*
Middle Unit	27,522	0	0	10,633	**16,889**
East Unit	82,681	25,515	82,681	0	0
Total	174,092	88,378	82,681	10,633	16,889*****

***** 1,026 acres remaining in West Unit has been eliminated from Proposed Action because area is too small to be manageable.

2. Livestock Numbers and Season of Use

Ephemeral sheep grazing leases managed under the BFO do not have specific "livestock numbers" attached to them. Authorizations to graze may be issued on a yearly basis, and the decision to permit grazing is based on the number of "bands" or flocks of sheep an operator wishes to graze and the ephemeral production calculated for that grazing year (ephemeral season).

In Barstow Field Office (BFO), a band of sheep is generally 500 to 1000 ewe-lamb pairs and averages 800 ewe-lamb pairs. An AUM is an "animal unit month" and is calculated on the amount of forage a sheep consumes in a month. Lambs are generally not counted as a separate AUM. Cattle set the standard at 1000 pounds of forage per month and sheep are calculated to consume approximately 200 pounds of forage per month. Therefore, there are five sheep per AUM. The season of use in the BFO has typically been from 3/01 to 5/31 in years when there is enough ephemeral forage production to sustain grazing. With only a portion of the Middle Stoddard Unit available for grazing, an average of 1 band of sheep per year is anticipated to graze in years when sheep grazing is authorized.

3. Livestock Management

The lessee and BLM make visual estimates of forage conditions starting in late-January or early-February. If follow-up vegetation clippings by BLM confirm that adequate forage production is available and a grazing application has been received from the lessee, BLM would make a determination of stocking rates that would be allowed in the given ephemeral season. Adequate forage production under the proposed action would be 230 lbs. air-dry per acre. In years that the Field Manager authorizes sheep grazing on the Stoddard Mountain Allotment, the lessee arranges to truck the sheep from the Bakersfield area.

On the first day of grazing, sheep would be trucked to the authorized area of use; typically, 4 large semi-trucks are used to transport each band, are unloaded and are allowed to “settle down” for an hour or so at the unloading spot, prior to initiating grazing. During this period, hauled water is provided to the sheep if conditions warrant. Each band is controlled by a herder and his dog(s) at all times. The lessee would provide each herder with a small camp trailer that a camp tender moves periodically to be close to the herder and his band.

It is the job of each camp tender (who is typically the foreman overseeing multiple herders and their bands) to move the herder's camp, provide food and supplies for the herder and his dog, and drive the water truck later in the season, when supplemental water is needed by the sheep. The Camp Tender normally stays in a more permanent Camp where the two vehicles are also staged. All vehicular travel would be restricted to designated open or other authorized routes. Each of the camps displays a BLM permit and the herders carry a copy of the authorization with them as they attend to the sheep.

The herders guide the sheep through the area of designated use, ensuring the band stays together and under control. The sheep customarily graze in a meandering pattern through the use area and are always in a loosely aggregated flock of about 800 ewe-lamb pairs. While the sheep are grazing, the length of time the individual plant in each of the different plant communities is subjected to grazing usually occurs over a period of less than one hour, as the sheep move through the country.

Each grazed area is not returned to during the remainder of that grazing year, ensuring forage is only grazed once per season (the "one pass" rule, from BO 1-8-03-F-58), adopted in the West Mojave Plan (Appendix O, Terms and Conditions). Each night, the band (flock) would be gathered in a tight group for bedding down.

Towards the end of the season when the forage starts to dry up and the sheep can not acquire their water needs through the vegetation, the band (flock) is gathered in a tighter aggregation along routes for watering. All sheep grazing would be subject to the grazing stipulations contained in the WMP and any other deemed appropriate by the Field Manager (see Part 7).

At the end of each authorized season, the sheep operator submits a map to BLM showing the loading, unloading and movements of sheep bands throughout the allotment during the season. At that time, BLM calculates actual use and then bills the operator for his season's grazing.

To facilitate avoidance and protection of the Mojave Monkeyflower Conservation Area, the boundary between portions of the revised allotment excluding this special area would be marked with flagging.

4. Range Improvements

There are no range improvements associated with ephemeral sheep operations on the Stoddard Mountain Allotment. The sheep operator utilizes trucks to haul water, to transport mobile water troughs, and to set up and tear down temporary camps and collapsible corrals used to hold the sheep when they are sheared.

5. Monitoring

In years when there is enough winter moisture to consider spring grazing in the desert, ephemeral forage production studies would be completed. These ephemeral forage production studies are performed using the Comparative Yield Method (Interagency Technical Reference 1734-4, pp.116-122). Then weekly, for each active sheep operation, the bands would be checked for their location and compliance with terms and conditions, and the

forage production would be estimated to ensure minimum production thresholds are maintained.

6. Measures to Maintain or Achieve Standards

To date, achievement of Fallback Standards and Guidelines for Livestock Grazing has not been assessed for the Stoddard Mountain ephemeral sheep grazing allotment. Although the Rangeland Health Assessment has not been completed for this allotment, the portion of the Middle Unit that would be available for ephemeral grazing under this alternative is also subject to substantial OHV and related impacts from adjacent community growth and the OHV Open area on the other side of I-15. If a future rangeland health determination concludes that a fallback standard is not being achieved, ephemeral sheep grazing would not be considered the primary causal reason, because of these other ongoing uses, because sheep grazing has been excluded from the Mojave Monkeyflower Conservation Area, and because sheep grazing does not utilize natural water sources.

If the allotment is not voluntarily relinquished within 24 months of adoption of the plan (i.e., not later than March 2008), the allotment would be scheduled for public land health assessment within 18 months (not later than September 2009). BLM would assess the portion of the Middle Unit potentially available for grazing in this timeframe since the proposed action eliminates sheep grazing from other portions of the allotment.

Fallback Standards that apply to this allotment are as follows:

1. Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, and landform; and
2. Healthy productive and diverse populations of native species exist and are maintained.

The assessment of indicators of rangeland health information is a qualitative/quantitative method. Data is gathered by an interdisciplinary team who take observations and direct measurements of various indicators to determine the health of rangelands and the achievement of fallback or regional standards of rangeland health. The assessment would be conducted following the procedures in the newly released "Interpreting Indicators of Rangeland Health (Tech Reference 1734-6), Version 4 (2005)" or latest update thereto.

The WMP changed available areas of use but did not change the guidelines for grazing management for this allotment, although subsequent assessments may result in additional guidelines. Under the WMP, the following measures would be implemented to protect rangeland health.

7. Proposed Grazing Stipulations

Per section 2.2.5.5.1 of the West Mojave Plan (WMP), the proposed action includes the terms and conditions for sheep grazing initial identified in the 1994 biological opinion (Ventura USFWS, 1-8-94-F-16) and incorporated into the 2006 Biological Opinion (BO) and associated Incidental Take Statement for the California Desert Conservation Area, West Mojave Plan (Ventura USFWS, 1-8-03-F-58) for conservation of desert tortoise. In addition, the West Mojave Plan implements additional terms and conditions for sheep grazing in

DWMA and for the protection of the Mojave Monkeyflower, including exclusion of ephemeral sheep grazing from the MMFCA. All of these would be made binding stipulations of the sheep operator's lease, and are listed below.

a. Terms and Conditions – WMP Non-DWMA DT habitat and MMFCA

1. To promote conservation of Mojave Monkeyflower, no domestic sheep use will be authorized within the Mojave Monkeyflower Conservation Area;

2. Turnout of sheep would not occur until 230 pounds (air-dry weight) per acre of ephemeral forage is available. The lessee would be required to remove sheep from the area or the entire allotment if production falls below 230 pounds per acre.

3. Only qualified personnel are allowed to handle desert tortoises, conduct clearance surveys, and monitor for desert tortoise compliance. Handling of desert tortoise by the lessee is prohibited.

4. The lessee is required to notify the Barstow Field Office immediately upon any instance of "take" (as defined by the Endangered Species Act) of a desert tortoise.

5. The lessee is required to contact the Barstow Field Office immediately if a desert tortoise is found injured or killed by human activities. Grazing may continue pending a review of the incident by the BLM and the U.S. Fish and Wildlife Service, provided all other stipulations of this lease have been adhered to.

b. Other Proposed Terms and Conditions – WMP

6. **Sites where sheep are bedded and watered shall be changed daily.** Bedding or watering sites are to be at least ¼ mile from any previous sites. Sheep are to be watered on or adjacent to existing dirt roads (within 25 feet) or existing disturbed or open areas cleared of shrubs from past uses.

7. No grazing is authorized except as approved through grazing application. All herders shall have a copy of the current use authorization in their possession and a copy posted at the herder's camp site. When sheep are trailed outside of the allotment, all herders are required to have a copy of the trailing authorization in their possession.

8. When lambs are with ewes, a band of sheep is limited to no larger than 1,000 adult sheep with approximately equal number of lambs.

9. Sheep are to be widely scattered or in a loose pattern when grazed through an area, and **grazing sheep are to graze/move through an area only once during the grazing season.**

10. Stopping and parking of vehicles, and vehicles camping along routes of travel is limited to 50 feet of all routes in multiple-use Class "L" and "M" as described on the maps in the California Desert Conservation Area Plan, as amended.

11. **A herder's camp site or camp trailer shall not remain in the same location for more than seven days. Establishment of a camp shall be at least one mile from any previous camp location.** To eliminate or reduce scavenging of trash by desert tortoise predators, trash and garbage shall be removed from each camp site each day and no trash or garbage shall be burned at the camp site. All sheep carcasses within 300 feet of a road would be removed and disposed of in an appropriate manner as soon as discovered and/or livestock operator is notified. Cross-country vehicle travel to gather sheep carcass(es) must have prior approval from the BLM.

12. Within 15 days of the close of the authorized grazing period, the lessee shall submit to the Barstow Field Office a BLM-supplied map to delineate areas of daily grazing use within the allotment.

13. Following the removal of lambs, when multiple sheep bands are typically combined, there would be no more than 1,600 adult sheep in a combined band.

c. Other Proposed Stipulations – BFO

14. Submission of actual use reports are to be received by the Barstow Field Office within 15 days after the end of the grazing authorization. Actual use reports are required to provide detailed location and number of livestock.

15. The terms and conditions of this lease would be modified if additional information derived from Rangeland Health Assessments indicates that revision is necessary to conform to 43 CFR 4180.2.

16. The payment of grazing fees shall be received within 15 days of the due date or the lessee will be charged a late fee assessment of $25 or 10% of the grazing bill, whichever is greater, not to exceed $250. Failure to make payment within 30 days of the due date may result in trespass action.

17. The lessee shall comply with any future standard protective measures that may be developed for the protection of cultural resources after an allotment inventory and determination of significant cultural resources has been completed.

B. No Action Alternative - Current Management under the Interim Measures

Under this alternative, BLM would also renew the allotment grazing lease for a period of 10 years and would permit grazing on the Stoddard Mountain Allotment under the existing terms and conditions of the stipulated settlement agreement interim measures. The interim agreement implements the terms and conditions of the Final Grazing Decision dated March 15, 1995, derived from the 1994 sheep grazing BO for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16) that was issued prior to the WMP and prior to the grazing guidelines contained in 43 CFR 4180.

1. Public Land Available to Sheep Grazing

The Stoddard Mountain Allotment being analyzed under this alternative contains a total of 174,092 acres of public land. Under this alternative approximately 107,087 acres of non-critical habitat would be available for ephemeral sheep grazing on public land. The Stoddard Mountain Allotment is divided into three separate grazing units: West Stoddard, Middle Stoddard, and East Stoddard.

Under this alternative, ephemeral sheep grazing in this allotment could occur in the entire Middle Unit of the allotment. Sheep grazing would be prohibited in approximately 65% of the West Stoddard Unit because it is within the boundaries of the critical habitat for the desert tortoise. In addition, grazing would be prohibited in approximately 31% of the East Stoddard Unit, located east of SR247, because this area is within critical habitat for the desert tortoise (see Table 2).

Table 2: Stoddard Mountain Allotment Acreage Available for Grazing Under No Action

Stoddard Mountain Allotment	Total Public Lands	Critical Habitat Acreage Excluded	Acreage Excluded by the 9-Mile Rule	Mojave Monkeyflower Conserv. Area Acreage Excluded	Remaining Acreage Avail. for Grazing
West Unit	63,889	41,490	n/a	n/a	**22,399**
Middle Unit	27,522	0	n/a	n/a	**27,522**
East Unit	82,681	25,515*	n/a	n/a	**57,166**
Total	174,092	66,525	n/a	n/a	**107,087**

* Includes 460 acres outside of critical habitat, that is isolated on the east side of SR247

The area east of SR247 has not been grazed since 1991. At that time, BLM identified Category I and II desert tortoise habitat, and no longer authorized sheep grazing in those areas. Subsequently in 1995, upon designation of critical habitat by USFWS, BLM issued a decision eliminating grazing from critical habitat as a term and condition of the lease, including portions of both the West Unit and East Unit (see Map 1).

Limitations on use areas imposed by the WMP would not occur under this alternative, including for

- protection of Mojave monkeyflower,
- elimination of potential conflicts with desert bighorn sheep (the “nine-mile” rule), and
- expansion of the grazing exclusion areas to include additional designated DWMA acreage outside critical habitat.

2. Livestock Numbers and Season of Use

Livestock numbers and season of use would be the same as the proposed action. Ephemeral sheep grazing leases managed under the BFO do not have specific "livestock numbers" attached to them. Authorizations to graze on a yearly basis are issued by the number of "bands" or flocks of sheep an operator wishes to graze, and the ephemeral production calculated for that grazing year (ephemeral season). The season of use in the BFO has typically been from 3/01 to 5/31 in years when there is enough ephemeral forage production

to sustain grazing. However, with the available grazing area under this alternative (the westernmost portion of the West Unit, the Middle Stoddard Unit and about ⅔ of the East Stoddard Unit), an average of 4 bands of sheep per year are anticipated to graze in years when sheep grazing is authorized, as compared with an average of 1 band per year under the proposed action.

3. Livestock Management

Livestock management on a day-to-day basis would be the same as the proposed action. All sheep grazing would be subject to the grazing stipulations contained in the 1994 Biological Opinion, in the subsequent 1995 Grazing Decision, and any other deemed appropriate by the Field Manager (see Part 7 of this alternative). A BLM representative would monitor the lessee's operation on a weekly basis to monitor forage production and compliance with the terms and conditions of their lease.

4. Range Improvements

As with the proposed action, there are no range improvements under the No Action alternative.

5. Monitoring

Monitoring would be conducted as in the proposed action, except that the threshold for turnout under the No Action alternative would be 200 lb. instead of 230 lb per acre. The ephemeral forage production studies are performed using the Comparative Yield Method (Interagency Technical Reference 1734-4, p116-122) to determine total, gross ephemeral production.

6. Measures to Maintain or Achieve Standards

Measures to maintain or Achieve Standards would be the same under the No Action Alternative as under the Proposed Action. In addition, the Rangeland Health Assessment would be scheduled using the same timeframes as the proposed action except that the priority areas for completion of a Rangeland Health Assessment would include the West, East and Middle Stoddard Units outside of critical habitat, since these areas potentially would be available for ephemeral sheep grazing. The same Fallback Standards would be enforced.

7. No Action Alternative Grazing Stipulations

Terms and Conditions A.7.a.1 and A.7a.2 of the proposed action, which prohibit grazing in the MMFCA and raise thresholds for initial turnout and removal of sheep from 200 to 230 lb air-dry weight of forage, would not apply under the No Action alternative. All other terms and conditions would be the same under this alternative, including those taken from the 1994 sheep grazing BO, the subsequent 1995 grazing decision, reporting and handling requirements in desert tortoise habitat, and other terms and conditions imposed by the BFO. They would be made binding stipulations of the sheep operator's lease.

C. No Grazing Alternative

This alternative would not authorize grazing on the Stoddard Mountain Allotment and would initiate a process in accordance with the 43 CFR 4100 and 43 CFR 1600 regulations to eliminate grazing and make the allotment unavailable for grazing. The no grazing alternative on this allotment, if selected, would be imposed upon the lessee; it would not be voluntary.

If the lessee submits a request for voluntary relinquishment of the lease for this allotment at any time during the life of the lease, BLM will review the analysis contained in this EA for the purpose of determining whether to accept such request. If conditions and circumstances remain substantially the same, no further NEPA document should be needed.

CHAPTER 3: ENVIRONMENTAL ANALYSIS

This chapter addresses, by affected resource, the affected environment, environmental consequences, and consultation sections of the EA, including all critical elements (H-1790-1, Appendix 5, BLM NEPA Handbook) and several other resource elements commonly affected by livestock grazing. If a resource is not present or not affected, a negative declaration statement is included in the Affected Environment section, and the resource element is not further addressed in this environmental assessment. The following list includes all elements addressed, with critical elements starred (*).

Elements:

A. Livestock Grazing
B. Air Quality*
C. Areas of Critical Environmental Concern (ACEC)*
D. Cultural Resources*
    Native American Concerns*
E. Environmental Justice*
F. Farmlands, Prime or Unique*
G. Flood plains*
H. Vegetation
    General Vegetation Communities
    Special Status Species*
    Invasive, Non-native species*
I. Recreation
J. Social and Economic
K. Soil
    Soils
    Biological Soil Crusts
L. Waste, Hazardous or Solid*
M. Water Quality, Surface and Ground*
N. Wetlands/Riparian Zones*
O. Wild and Scenic Rivers*
P. Wilderness*
Q. Wild Horses and Burros
R. Wildlife
    Common Animals
    Special-Status Species*

Analysis in this chapter focuses on the proposed grazing action and alternatives for the Stoddard Mountain Grazing Allotment, and in particular on those areas where sheep turnout may be allowed. For the proposed grazing action (the Middle Unit, exclusive of the Mojave Monkeyflower Conservation Area) this includes the area west of I-15, east of National Trails Highway, and east/southeast of the community of Helendale, CA, in rural San Bernardino County (see Map 2).

For the No Action alternative (Middle Unit, inclusive of the Mojave Monkeyflower Conservation Area and the West and East Units, exclusive of critical habitat) this includes

the area located west of I-15, immediately west and east of National Trails Highway, north to SR58 and west to the Fremont-Kramer critical habitat boundary, and east/southeast of the community of Helendale, CA. The East Unit, exclusive of critical habitat is located east of I-15, extending east to SR 247. Much of the East Unit overlaps the Stoddard Valley OHV Open Area (see Map 1).

A. Livestock Grazing

1. Affected Environment

The Stoddard Mountain Allotment, #8010, is an ephemeral allotment with potential forage production to enable the Bureau of Land Management (BLM) to authorize an ephemeral forage allocation for the purpose of grazing domestic sheep. The allotment is separated into three grazing units, the West Unit, the Middle Unit, and the East Unit. Of the 174,092 acres within the allotment boundaries prior to the WMP, the current lease makes approximately 107,087 acres potentially available for grazing, or approximately 62 % (see Table 2 in Chapter 2).

This allotment is located in rural San Bernardino County, approximately two miles south of the City of Barstow. Elevations range from 2,240 to 4,775 feet. The West Unit is bordered by the Hinkley on the east, State Highway 58 on the north, US 395 on the west, and the Helendale area on the southeast. The East Unit is bordered by the City of Barstow on the north, just past State Highway 247 on the east, I-15 on the west and Sidewinder Valley on the south. The Middle Unit is bordered by I-15 on the east, National Trails Highway on the west, City of Victorville on the south, and the community of Lenwood on the north.

The available portions of the Stoddard Mountain Allotment under the existing lease consist of large mountain ranges and hills, alluvial fans and large valley bottoms in the East Unit. The Middle Unit is mountainous in the southern portion and the central and northern portions consists of rolling hill and valley bottoms. The southwestern portion of the West Unit consists of alluvial fans and large valley bottoms as well as isolated mountains and hills. The alluvial fans, rolling hills and valley bottoms, constitute the topography where the vast majority of ephemeral sheep grazing has historically occurred.

Of the 107,087 acres potentially available for grazing under the current lease, the proposed action makes approximately 16,889 acres potentially available for grazing, or approximately 16 % (see Table 1 in Chapter 2). The lease acreage before and after adoption of WMP is as follows. Prior to the boundary modifications within the WMP, the Stoddard West Unit included approximately 22,399 acres of non-critical habitat on public land that was available for ephemeral sheep grazing; since the adoption of the WMP, the Stoddard West Unit has been eliminated from the allotment because 98 percent of it is within designated DWMA.

The Stoddard Middle Unit encompasses approximately 27,522 acres of non-critical habitat public land potentially available for grazing, and its boundaries were not changed in the WMP. Prior to the boundary modifications within the WMP, the Stoddard East Unit included approximately 82,681 acres, of which 57,166 acres of non-critical habitat public land was available for ephemeral sheep grazing. Since the adoption of the WMP, the

Stoddard East Unit has been reduced in size to 57,166 acres because the remainder of the allotment is within designated DWMA.

The total allotment area and available area for ephemeral sheep grazing under the current lease, as well as the revised allotment area available for grazing under the WMP and under the No Grazing alternative, are shown in Table 3 for comparative purposes.

Table 3. Areas of Potential Sheep Grazing For Stoddard Mtn Allotment Alternatives

Stoddard Mountain Ephemeral Sheep Allotmt	Public Lands in Allotment	Unavailable for Ephemeral Grazing	Available for Ephemeral Grazing
Proposed Action-WMP	**85,714**	**68,825**	**16,889**
No Action-Current Lease	**174,092**	**67,005**	**107,087**
No Grazing	**85,714**	**85,714**	**0**

The current lease authorizes the operator to turn out sheep during years in which ephemeral forage production reaches 200 pounds per acre within the portions of the allotment in which grazing is allowed (non-critical desert tortoise habitat or non-habitat).

The West Unit was not grazed between 1991 and 1994 when it was identified as Category I desert tortoise habitat. In 1995, critical habitat replaced desert tortoise categories as the basis for grazing terms and conditions, including 65% of the West Unit. The remaining portion was potentially available for ephemeral authorization, but has been infrequently grazed since then. The Middle Unit was grazed during productive years until the mid 1990's. At that time, large tracks of public land were exchanged for private lands in critical habitat under the West Mojave Land Tenure program, and its use has been infrequent since the mid-1990's. Since 1991, the East Unit has been the most utilized for ephemeral sheep grazing. During very productive years (greater than 800 lbs./acre) up to three different sheep operators have utilized the East Unit, west of SR247.

In March 2006, the Record of Decision for the WMP was approved. The approved WMP implemented the allotment boundary changes discussed above, designation of the Mojave Monkeyflower Conservation Area (MMFCA) and associated elimination of grazing in the MMFCA, and the "Nine-Mile Rule." Under the Nine Mile Rule, ephemeral sheep grazing is not authorized on those portions of the allotment within nine miles of occupied habitat for bighorn sheep. The only exception to this rule is the existence of a barrier that would prevent species-to-species contact, such as is provided by I-15 for domestic sheep in the Middle Unit and bighorn sheep in the Ord Mountains and their surrounding foraging area.

2. Environmental Consequences

a. Impacts of Proposed Action

The implementation of the WMP would result in a substantial reduction of available forage area and associated livestock production to this lessee from public lands. Approximately 16

percent of the public land available under the current lease would be available under the WMP.

The primary impact to the Stoddard Mountain ephemeral sheep grazing lease would be in the East Unit, the primary unit for grazing under the current lease due to its productivity and its overlap with other intensive uses (Stoddard Valley OHV Open Area). Three-fourths or more of the grazing over the last 15 years has been in this Unit, averaging 3 bands per year when sheep are grazed. Under the WMP, the Nine Mile Rule would be in effect, and this Unit would no longer be grazed in order to eliminate potential contact with desert bighorn sheep.

The available grazing area in the WMP would be located in the Middle Unit, west of I-15. This area is anticipated to support up to 1 band of sheep in years when sheep grazing is authorized. This reduction therefore represents a substantial impact the lessee and his sheep operation during the productive forage years when sheep are turned out. In a productive year (>500 lbs./acre) 500 to 1,000 ewes and an equal number of lambs would be anticipated for turn out for 60 days prior to moving to summer mountain pastures in the Inyo National Forest.

The lessee may secure alternative private rangelands in good forage years to reduce or eliminate livestock production losses. This would increase his financial cost directly as well as indirectly. In addition to increased costs of private land forage, the lessee will encounter increasing demand on a shrinking forage base and increased costs associated with the logistical challenges of managing bands of sheep on more scattered and smaller blocks of private lands in the Mojave Desert. In addition, the lessee's potential use of intermingled non-public lands for ephemeral sheep grazing is likely to decrease somewhat because grazing some of these historically used adjacent intermingled private lands is no longer practicable.

Other impacts to the lessee or his operation because of the WMP are nominal.

In summary, this alternative would result in the substantial reduction to, and possible eventual loss of another public-land grazing operation in the Mojave Desert, additional management costs on adjacent private pasture lands, and/or displacement of sheep grazing activities further north. This impact is consistent with overall local or regional trends of decreasing public and private range acreage and opportunities in Southern California, but does not represent a significant loss of agricultural (lamb) production. This does represent a substantial loss of potential ephemeral rangeland on public lands to this operator.

b. Impacts of No Action

Under this alternative, sheep grazing would continue to occur on portions of all three units, but primarily in the East Unit. Both the Middle and East Units include substantial areas that are outside critical habitat or DWMA.

Ephemeral sheep grazing would continue on the Middle and East Units under the grazing stipulations contained in the Final Grazing Decision dated March 15, 1995, derived from: the 1994 Biological Opinion for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16) that was issued prior to the WMP and the grazing guidelines contained in 43 CFR 4180. Grazing on the West Unit could be subsequently approved if a plan amendment

revising the allotment boundaries is successfully processed. Such an amendment would be considered upon application by the lessee for use of this area.

Under this alternative, sheep grazing could be considered within the MMFCA and the East Unit covered under the Nine-Mile Rule. In a productive year (>500 lbs./acre), 2-6 bands or 1,600 to 4,800 ewes and an equal number of lambs would be anticipated for turn out for 60 days prior to moving to summer mountain pastures in the Inyo National Forest. If a plan amendment is successfully completed, the level of use could increase over the long-term by 1 additional band, or 500 to 1,000 ewes and an equal number of lambs.

c. Impacts of No Grazing

The implementation of the No Grazing alternative would result in a complete loss of available forage area on public lands to this lessee. This would result in a decrease of livestock production to this lessee in good forage years due to the loss of (>500 lbs./acre) of turnout of 1,600 to 4,800 ewes and an equal number of lambs, or an average of 4 bands, in years when sheep turnout.

As with the Proposed Action under the WMP, the lessee may secure alternative private rangelands in good forage years to reduce or eliminate production losses, with similar increased costs.

Similar to the proposed action, this alternative would result in the loss of another public-land grazing operation in the Mojave Desert, additional management costs on adjacent private pasture lands, and/or displacement of sheep grazing activities further north. This impact is consistent with overall local or regional trends of decreasing public and private range acreage and opportunities in Southern California, but does not represent a significant loss of agricultural (lamb) production. This does represent a substantial loss of potential ephemeral rangeland on public lands to this operator.

3. Consultation

Consultation has been initiated and would continue to occur with the Stoddard Mountain all lessee, interested publics, County government, and Native American tribes with traditional ties to allotment lands.

4. Maps

See Maps1, 2, and 3.

5. References:

U.S. Bureau of Land Management. 1980. California Desert Conservation Area Plan. Riverside, CA

U.S. Bureau of Land Management. 1982. *Stoddard Mountain Allotment Management Plan*. Barstow, CA

U.S. Bureau of Land Management. 2006. West Mojave Plan Amendment. Moreno Valley, CA

U.S. Fish and Wildlife Service. 1994. Biological Opinion for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16).

U.S. Fish and Wildlife Service. 2006. Biological Opinion for the California Desert Conservation Area Plan [West Mojave Plan] (6840(P) CA-063.50) (1-8-03-F-58).

B. AIR QUALITY

1. Affected Environment

The project area for the purpose of this analysis is the Stoddard Mountain Allotment located in rural San Bernardino County (see Map 1).

The project area is part of the Mojave Desert Air Basin. Most days air quality is good to fair. Windblown air pollutants from the South Coast Air Basin, which includes Orange County and non-desert portions of Los Angeles, Riverside, and San Bernardino counties, strongly influence the air quality of the Mojave Desert Air Basin. As pollutant emissions continue to decline in the South Coast Air Basin, the Mojave Desert Air Basin will benefit.

The pollutant emissions from sources, climatic conditions, and atmospheric interactions determine the quality of air. Air quality in a given location is described by the concentration of various pollutants in the atmosphere. An area is designated by the EPA as being in non-attainment for a pollutant if ambient concentrations of that pollutant are below the National Ambient Air Quality Standards (NAAQS). Primary pollution sources do not necessarily have to be located within the area so designated.

Non-attainment areas are designated if repeated violations of the NAAQS occur. The relative seriousness of the problem is determined at the time that a basin is determined to be in non-attainment of national standards. The classification may be deemed to be Very Serious, Serious or Moderate non-attainment. The California Clean Air Act of 1988 also requires that areas of California be designated attainment, non-attainment, and unclassified for state ambient air quality standards. The Stoddard Mountain allotment is included in an area classified by EPA and the California Air Resources Board as a Moderate non-attainment area for particulate matter (PM^{10}) and serious non-attainment for ozone.

Sources for ozone emissions include exhaust from primary transportation vehicles (particularly diesel trucks) industrial sources including secondary sources, and climatic sources. Grazing management activities do not contribute measurably to ozone emissions.

Primary sources for emissions of particulate matter under 10 microns, PM^{10}, in the project area are wind erosion on unpaved surfaces including disturbed areas, construction activities, mining-related activities, use of unpaved routes, and dirt storage piles. During most days of the year, visibility exceeds 25 miles. Exceptions occur during strong westerly winds when dust is blowing, during upwind forest fires, and when smog filters up from the Los Angeles Basin. There are no major single sources of pollutant emissions in the project area.

Permitted and casual use of motorized vehicles in the OHV Open Area results in short-term spikes of pollutants during periodic competitive events and high-use weekends, particularly during spring and fall holidays. Generally, locally generated PM^{10} pollution is somewhat greater in the OHV open areas, which have increased disturbed area and route densities, as well as increased unpaved route use.

The Mojave Desert Air Quality Management District (MDAQMD) has State air quality jurisdiction over San Bernardino County, and has been delegated authority to implement the Clean Air Act from the EPA. MDAQMD has analyzed impacts from existing sources for PM^{10}, and prepared a state implementation plan (SIP) for the Mojave Desert planning area which identifies sources of emissions and control measures to manage existing emissions and reduce new emissions (MDAQMD, 1995). In the SIP, Miscellaneous Area Sources were considered to by a minor category of PM^{10} emissions in the planning area, generating 1.3% of total emissions in 1990. Agricultural activity is a small contributor within this miscellaneous category, and the grazing allotment a small portion of the agricultural activity contributions. No measures were identified in the SIP specific to existing livestock grazing activities, and renewals of leases were exempted from conformity determinations consistent with the SIP, due to their nominal (less than 15 tons/year) contributions to air quality in the Mojave Desert planning area (BLM, 1997). No alternatives are anticipated to result in increased grazing activities over historic levels, and regional exceedances of PM^{10} standards have decreased approximately 10% (EPA, 2003) due to voluntary and SIP measures to decrease emissions from substantial sources. Therefore, there would be no substantial affect to air quality under any of the alternatives.

2. References

Final Mojave Desert Planning Area Federal Particulate Matter (PM10) Attainment Plan, Mojave Desert Air Quality Management District, 31 July 1995, approved by MDAQMD in July, 1996.

U.S. Bureau of Land Management. 1997. *Fugitive Dust/PM10 Emissions Control Strategy for the Mojave Desert Planning Area.* Barstow Field Office, Barstow, California.

U.S. Environmental Protection Agency. 2003. *National Air Quality and Emissions Trend Report*; Figure. 2-40: Trend in PM10 annual mean concentration by EPA Region, 1992–2001.

C. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

1. Affected Environment

The project area for the purpose of this analysis includes 4 ACEC. Two DWMA, the Fremont-Kramer and Ord-Rodman, as well as the Mojave Monkeyflower Conservation Area were established as ACEC by the West Mojave Plan (2006), and overlapped portions of the Stoddard Mountain sheep grazing allotment in rural San Bernardino County (see Map 1). Two of these three ACEC would not provide for sheep grazing under any of the alternatives, and are not discussed further. Portions of the Fremont-Kramer DWMA may be grazed under the No Action Alternative; however, selection of the No Action alternative would not

authorize grazing of the DWMA. A subsequent plan amendment would be required that would provide additional analysis to address potential affect to ACEC values. Since this plan amendment is not reasonably foreseeable, it is not discussed further.

The fourth ACEC, the Mojave Fishhook Cactus ACEC, is comprised of 640 acres of public lands area in the east half of Section 32 and the north half of Section 4, within the Stoddard Mountain Allotment – Middle Unit, located in rural San Bernardino County (see Map 2). BLM designated the Mojave Fishhook Cactus ACEC in May, 1984 based on the concentrated occurrence of the sensitive species, Mojave fishhook cactus (*Sclerocactus polyancistrus*). The Mojave fishhook cactus range has been identified as encompassing a north-to-south oval broader in western Nevada tapering to a thinner swath in western San Bernardino County, California. This ACEC is at the southern end of its range, east of National Trails Highway, and due east of Helendale, California.

Ephemeral sheep grazing was present at the time of ACEC designation and is not anticipated to affect the basis for which this area met relevance and importance criteria for ACEC designation. The fishhook cactus and associated habitat will continue to be relevant and important (i.e., threatened) regardless of the presence of sheep for the reasonably foreseeable future, due to the slow reproductive rates of the species, and sheep are not known to forage on this species. Site-specific impacts, including those to the fishhook cactus and its habitat, are addressed in the Vegetation Resources analysis.

D. CULTURAL RESOURCES & NATIVE AMERICAN VALUES

1. Affected Environment

A large portion of the allotment is within the Stoddard Valley OHV Open Area. Previous cultural surveys of the allotment covered less than 50% of the total allotment, were focused in the OHV Open Area and in other high impact areas, and were generally conducted in the 1980s. There are four documented historic sites within the Stoddard Mountain allotment, Middle Unit and 36 sites in the East Unit. One site has been fenced and data recovery has occurred at two sites to mitigate potential adverse affects unassociated with grazing.

The sites consist of lithic scatters, prehistoric circles/alignments, power transmission lines, the National Trails Highway (Route 66), and a portion of a historic rail line. These known sites would not be threatened by sheep grazing. Recorded sites were visited by the Barstow Field Office Archaeologist in the fall of 2006. The sites show no impacts because of sheep grazing. Field surveys pursuant to the Supplemental Programmatic Agreement for Livestock Grazing for active portions of the Stoddard Mountain allotment are scheduled for completion by September 2010.

Within the jurisdiction for the BFO, there is approximately 333,602 acres of public land that have been historically utilized for sheep grazing. The Supplemental Programmatic Agreement for Livestock Grazing allowed 10 years to complete the cultural resource surveys of the grazing allotments as this is a time-consuming task. There are eight years remaining to fulfill the surveys. The agreement "allows for renewal of an existing grazing permit prior to completing all NHPA compliance needs as long as Protocol direction, the BLM 8100 Series

Manual guidelines (Protocol Amendment F), and specific stipulations are followed" (see Attachment 1).

a. Native American Values

Four Native American tribes have interests in the Stoddard Mountain Allotment within the Barstow Field area. The northern portion of the allotment is known to include sites dating back to prehistoric occupation by the Serrano people. In addition, many tribes have used trails through the area that parallel and give easy access to the Mohave River. Consultation with Native Americans and interested publics on the proposed lease renewal was initiated in April 2006. There were no concerns expressed for specific sites or allotments by these parties.

2. Environmental Consequences

a. Impacts of Proposed Action

No known previous or ongoing impacts from sheep grazing to cultural resources or Native American values were identified during past surveys, recent field visits, and discussions with potentially affected tribes. Standard protective measures would be conditions of the proposed grazing lease renewal. These measures will be implemented for cultural sites that are adversely affected because of grazing, if and when such impacts are identified during future cultural surveys or regular rangeland monitoring.

b Impacts of No Action

Impacts and mitigation would be the same as the proposed action.

c. Impacts of No Grazing

Under this alternative, there would be no future impacts to cultural resources from sheep grazing, as grazing would be permanently removed. It is unknown at this time to what extent cultural resources would benefit from the removal of sheep, because of the incompleteness of the current cultural survey for the area and because of other ongoing impacts unrelated to grazing. However, surveyed areas are not currently being impacted by grazing, so removal of sheep is not anticipated to result in substantial benefits to cultural sites.

3. Consultation

a. Native American Concerns

Four Native American tribes have interests in the Stoddard Mountain Allotment within the Barstow Field area. Consultation with Native Americans and interested publics on the proposed lease renewal was initiated in April 2006. There were no concerns for Native American values expressed for specific sites in this allotment, or this allotment in general, by these parties.

Comments and concerns regarding cultural and religious values within this allotment that may be affected by livestock grazing will be solicited and incorporated into follow-up site-specific cultural evaluations.

b. State Historic Preservation Office

Consultation was conducted with the California State Historic Preservation Office November 17, 2004 to submit a schedule for implementation of the *Supplemental Procedures for Livestock Grazing Permits/Lease Renewals, A Cultural Resource Amendment to The State Protocol Agreement California Bureau of Land Management and the California State Historic Preservation Officer* (see Attachment 1).

4. Maps

Maps and locations of known cultural sites are maintained at the San Bernardino Archaeological Information Center, but are not available for public release.

5. References:

U.S. Bureau of Land Management. 2004. Supplemental Procedures for Livestock Grazing Permits / Lease Renewals, A Cultural Resource Amendment to The State Protocol Agreement: California Bureau of Land Management and the California State Historic Preservation Officer. Sacramento, California (see Attachment 1).

U.S. Bureau of Land Management. 1993. *Stoddard Valley Off-Highway Vehicle Area Management Plan*. Barstow, California.

E. ENVIRONMENTAL JUSTICE

1. Affected Environment

The project area for the purpose of this analysis is rural San Bernardino County. Individual incomes vary widely in the sheep industry, depending on size of farm and whether activities are pursued on a full-time or part-time basis. Generally, farm incomes are above average as compared with other incomes in rural San Bernardino County (*USDA National Agriculture Statistics Service, 2002 Census of Agriculture, CA, SBCO County*). Overall, seasonal laborers hired by farm industries, including livestock ranchers, come from low-income households. This is typical of rural areas in general as compared with the overall population average income. Unlike other farm and livestock industries, one ethnic community, the Basque, is unusually prevalent in the sheep industry, including in Southern California.

In 2000, Basques made up approximately $^{1}/_{10}$ of one percent of the California population. California still has the largest Basque population in the United States, 20,868 individuals, and accounting for over 36% of their total population in the United States. Within California, median incomes in this ethnic group are somewhat higher than for the overall State population, and poverty levels are substantially lower. Their numbers are not broken down by specific industry occupation, but they have maintained their historic dominance in the sheep ranching industry in southern California. A survey in 1990 found that 7 percent of

Basque workers were engaged in the farming, forestry and fishing industry. The majority of these are engaged in ranching, and specifically sheep-ranching related industries.

Basque ranchers and herders are originally from a distinct northern Spanish Basque province, composed of several States. Basques include those of northern Spanish and southern French heritage that have a common cultural heritage and speak a distinctive language (Euskarez) to that region. They do not consider themselves Hispanic, and are not treated as such in census surveys. The Basque people have traditionally been known as sailors, fishermen, ranchers and tradesmen. Basque emigration to the Americas began during the Spanish and French colonial periods in the 16th and 17th Centuries, and included settlements in Newfoundland and Quebec, Florida, and Central America. As late as 1800, there were less than 1,000 Basque in the United States.

With the advent of the Gold Rush and westward expansion, many Basque moved to southern California as miners, ranchers or businessmen. Basque names have been so prominent in the western sheep business, that they were regarded by many as its founders. They have been herding and ranching sheep in the Americas since sheep were brought here in the colonial period and in California since the middle of the 19th Century. The sheep industry in California still includes Basque business owners, operators and their employee herders, comprising a wide range of asset and income levels. Many of the Basque herders are seasonal employees from South America and contribute substantial support to their families from their seasonal shepherding income in the U.S.

2. Environmental Consequences

a. Impacts of the Proposed Action

The loss of sheep grazing opportunity on over 90,000 other acres because of various limits approved through the WMP would result in the loss of incomes and jobs to a measurable number of members of a small ethnic community in Southern California. Resumption of sheep grazing on 16,889 acres of public lands during higher forage-production years would continue to contribute incomes and jobs to some members of this community, and would partially offset the industry and income losses.

As with other American immigrants, as their time in America has increased, their participation in the U.S. economy has diversified. However, sheep grazing still represents a link for this group to their cultural heritage and a way of life that substantially contributed to establishing their Southern California roots. The proposed action would contribute to the weakening of this cultural link. However, this loss would not substantially adversely affect the links of the Basque community to their cultural heritage and way of life, as personified by their shepherding heritage, since sheep grazing would still represent a substantial core of employment for the Basque community in Southern California.

In addition, this impact to the Basque community is occurring because of the substantial participation of Basques in the sheep business rather because they have been targeted as an ethnic group within the livestock industry. There have been changes throughout the livestock industry on public lands because of actions taken in the WMP to conserve and recover sensitive species and critical habitats. Therefore, in the context of overall changes in the

WMP adopted for the livestock industry, as well as for permitted uses in general, these environmental impacts are not considered disproportionately high and adverse.

b. Impacts of the No Action Alternative

There would be no environmental justice impacts to the Basque community from grazing under the No Action Alternative, since the No Action alternative represents current grazing practices.

c. Impacts of the No Grazing Alternative

Permanent elimination of sheep grazing on 107,087 acres of public lands during higher forage-production years would result in the loss of approximately 25 sheep industry jobs to members of a small ethnic community in Southern California, unless alternative forage sources are identified on private lands. An overall trend of diversifying employment in the Basque community is occurring and this loss would contribute to that trend.

This loss would not substantially adversely affect the links of the Basque community to their cultural heritage and way of life, as personified by their shepherding heritage, since sheep grazing would still represent a substantial core of employment for the Basque community in Southern California.

In addition, this impact to the Basque community is occurring because of the substantial participation of Basques in the sheep business rather because they have been targeted as an ethnic group within the livestock industry. There have been changes throughout the livestock industry on public lands because of actions taken in the WMP to conserve and recover sensitive species and critical habitats. Under this alternative, the sheep grazing industry could bear an inequitable (disproportionately high and adverse impact) to address species conservation issues as compared with other public land users, given the relative impacts from sheep grazing.

3. Consultation

Consultation has occurred and would continue with the Stoddard Mountain lessee and interested publics that may have an interest in the Stoddard Mountain Allotment.

4. Maps

No maps are specifically associated with this analysis, but maps are available at the website listed below.

5. References

U.S. Bureau of Census, *Selected Characteristics for Persons of Basque Ancestry: 1990*, Table CPH-l-149.

U.S. Bureau of Census, *Census 2000 Demographic Profile Highlights: Selected Population Group: Basque (005-007), California*.

The Basque in America, www.euroamericans.net/basque.htm, The Basque Country webpage and the U.S Basque History webpage, 2007.

F. FARMLANDS, PRIME OR UNIQUE

1. Affected Environment

The proposed action or any alternative would have no affect on farmlands, prime or unique. There are farmlands located in the extreme southeastern corner of the West Unit; however this grazing area would only be authorized for sheep grazing under the No Action alternative, and under that alternative, sheep are not anticipated on nearby public lands because of the closeness to critical habitat. Any bands would be turned out further north, where public lands are better consolidated.

G. FLOOD PLAINS

1. Affected Environment

The proposed action or any alternative would have no affect on flood plains. There are floodplains located in the extreme southeastern corner of the West Unit; however, as mentioned in the previous discussion for farmlands, this grazing unit would not be authorized for sheep grazing under the proposed action and any turnout under No Action would occur further north.

H. RECREATION

1. Affected Environment

The portions of the allotment that remain available to sheep grazing under the Proposed Action or No Action are divided between the public lands located east of I-15 within the Stoddard Mountain OHV Open Area; and those located west of 1-15 outside of the OHV Open Area. The Open Area lands are within the Stoddard Mountain Allotment-East Unit, and the lands west of i-15 are within the Middle and West Units.

The Stoddard Mountain Grazing Allotment - East Unit lies within the Stoddard Valley Off-Highway Vehicle OHV Area, within the larger Johnson Stoddard Special Recreation Management Area. The Special Recreation Management Area was established because of the historic high recreation opportunity and use in the OHV Areas and the additional recreation values and uses found in the Ord Mountain area. The Stoddard Valley OHV Open Area was established to provide an area for intensive, organized and casual recreation use. This OHV Open Area entirely overlaps the boundary of the Stoddard Mountain Allotment-East Unit. The Stoddard Valley OHV Area Management Plan identifies how the area will be managed with the emphasis being on off-highway vehicle and other recreation, as well as compatible uses.

Johnson and Stoddard Valleys receive over 100,000 off-highway vehicle visits per year, including both casual and permitted uses. Casual OHV use by individuals and family groups

is widespread, particularly on fall, winter, and spring weekends in the Middle and East Units. In addition, visitors are involved in a large number of events that are issued Special Recreation Permits. Stoddard Valley hosts approximately one-fourth of the approximately 50 permitted events, including six car/truck races, a few motorcycle races, and other assorted motorized events. The number of Special Recreation Permits is stable in this area.

Most of the Middle Unit is private land and weekend visitors often do not know land status, so OHV uses on private land often spill over onto adjacent public land (Ahrens, Pers. Comm. 2006). These uses include off-route motorized activities that are limited on public land to the OHV Open Area on the other side of I-15. The Middle Unit also receives some use for non-OHV recreation. The most common of these are target shooting, upland game hunting (in season), rockhounding, and general touring around the areas. There is a great deal of camping that takes place associated with this unit. Recreational use is generally light in the West Unit.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action would have little effect on recreational users or uses of the allotment. No injuries have been documented to recreationists because of sheep grazing. Under the Proposed Action, there are no potential conflicts between grazing and recreational enjoyment of the Open Area because no turnout would occur in the OHV Open Area. OHV use is also moderate to heavy on the portions of the Middle Unit where sheep turnout may occur, but is confined to designated routes on public land. The lessee typically keeps his sheep away from high OHV use areas on the weekends to reduce the potential for conflict.

There are localized conflicts between recreationalist and campers related to the presence of sheep dung, especially near current and past bedding and watering sites adjacent to roads. These sites can be readily avoided by recreationists and campers, as alternative sites for camping and recreation are readily available.

b. Impacts of No Action

Under the no action alternative, impacts to recreation would be similar to the proposed action, except that potential impacts from conflicts between recreationists and sheep use in the Stoddard Valley OHV Area would continue. These impacts have historically been nominal due to regular communication between the BLM and both grazers and permitted event sponsors to make each aware of the others' presence, and because the lessee typically keeps his sheep away from high OHV use areas on the weekends to reduce the potential for conflict. There have been no conflicts documented between these two uses.

c. Impacts of No Grazing

Under this alternative there would be no ephemeral sheep grazing in the Stoddard Mountain Allotment. Therefore, the potential for conflict between sheep grazing and recreational use would be eliminated.

3. Consultation

Consultation has occurred and would continue with the Stoddard Mountain lessee and interested publics that may have an interest in recreational activities within the Stoddard Mountain Allotment.

4. Maps

None.

5. References:

Ahrens, M. 2006. Personal communication.

U.S. Bureau of Land Management. 1993. *Final Stoddard Mountain OHV Area Plan*. OHV Area Boundary Map, Map 2, p. 28.

I. SOCIAL AND ECONOMIC VALUES

1. Affected Environment

The Stoddard Mountain ephemeral sheep allotment is located in rural San Bernardino County. The sheep operators in the Mojave Desert primarily reside in an adjacent county closer to market shipment points, in this case Kern County in the greater Bakersfield area. Typical of this industry, market transactions are generally done over the internet and phone for sale of sheep products (i.e., meat, wool).

Operators hire herders on a yearly basis, primarily from South America. This labor typically consists of two to four persons. Therefore, primary revenues accrue to Kern or Riverside Counties, while social benefits accrue to both of those counties as well as San Bernardino County. Therefore, the project area for the purpose of this analysis is Kern, Riverside and San Bernardino Counties.

In these three counties, as with most of Southern California, overall land area and farm size has been decreasing over time, while market values of all farm products have been increasing. The decrease in land area from 1987 to 2002 was approximately 27%, while inventories of sheep decreased by 30% during the same 15-year period. During this 15 years, market values of agricultural products have steadily increased, except for the temporary downturn that occurred in the entire market in the fall of 2001. This trend has been more pronounced for wool. In California in the last 5 years alone, wool production has gone down almost 20 percent, while prices have gone up 150 percent.

California is the top sheep and wool producing State in the nation, and ranks in the top five states in terms of the relative contribution of agricultural production to the overall State economy. Kern and Riverside Counties in particular stand out based on their high State rank for market shares for wool and sheep. Kern County is a significant national producer of products, ranking fourth in market value in the nation among Counties for sheep, goat, and wool products. A substantial amount of the labor force participates in the sheep industry in

Kern County in particular. Overall, ranching-related production represents approximately 1% of the State's gross state product, ranking behind most other industries, but still contributing a measurable amount of production to the State GDP (*California Statistical Abstract*, California Department of Finance, Table D-4, January, 2006).

The Stoddard Mountain allotment is abutted on the north and south by small urban areas that are growing at a modest pace. Even within the allotment, many lots have been sold for homesteads or housing developments, but actual development is still spotty. Conflicts between residents and traditional rural land uses such as ranching exist, but have not created major urban interface problems for lessees or the community around lessees on this allotment, to date. No residents that own private property within the allotment boundaries have expressed concerns about the resumption of grazing.

The contribution of the Stoddard Valley allotment to the overall goods and services of the area is nominal. The sale of lambs at the stock yard by the lessee benefits the financial needs of the lessee, as any small business would, and allows them to purchase goods and services for their grazing operation and personal household. This operation is relatively small and its effects on the general economy of both Kern and San Bernardino Counties are minor.

2. Environmental Consequences

a. Impacts of Proposed Action

Under the proposed action, grazing would continue at reduced stocking rates on public land within the Middle Unit. These levels would be at their lowest point when compared to historic levels, and based on regional trends, can be expected to contribute to a similar decrease regionally. The nominal economic and market contributions of ephemeral sheep grazing on the Stoddard Mountain allotment to Kern and San Bernardino Counties is not substantial; therefore the overall effect of this decrease on the County economies would not be substantial.

The proposed action represents higher operating costs for the lessee because less than 17,000 acres of public land on Barstow Field Office managed lands would be available to the sheep and woolgrower. This would result in an increase in the annual cost to this operator to obtain private pasture and take advantage of the Mojave Desert's productive ephemeral bloom in years when it occurs.

b. Impacts of No Action

Under the no action alternative, impacts to regional social and economic values would be similar to the proposed action because this operation has such a small effect on the regional economy. Impacts to the lessee would be substantially lower because in addition to the Middle Unit, portions of the West and East Units could be authorized for sheep grazing. This would result in substantially higher authorized higher stocking rates on public lands in productive forage years, because over 600 percent more public land would be available for ephemeral sheep grazing.

c. Impacts of No Grazing

Under the no grazing alternative, impacts to regional social and economic values would be similar to the proposed action because this operation has such a small effect on the regional economy. Because the woolgrower would no longer be able to graze his sheep on public land in the Barstow Field Office, there would be an increase in the annual operational cost to the woolgrower operator to obtain private pasture and take advantage of the Mojave Desert's productive ephemeral bloom in years when it occurs. This increase would be similar to, but somewhat greater than, that for the proposed action.

3. Consultation

Consultation would continue with the lessee, interested publics, County governments, and Native American tribes with traditional ties to the lands within the allotment being analyzed.

4. Maps

None.

5. References

2002 and 1992 Census of Agriculture, USDA, National Agricultural Statistics Service, Vol. 1, Ch. 2, 2004.

California Statistical Abstract, California Department of Finance, Table D-4, January, 2006.

J. SOILS

1. Affected Environment

a. Soils

The majority of the Stoddard Mountain Allotment has had an Order III soils survey conducted by the NRCS in 1978.

The surveyed portions of the Stoddard Mountain Allotment (excludes the western portion of the West Unit that has not been grazed since 1991) is dominated by 11 soils, complexes and associations. These include:

1) Cajon Gravelly Sand - very deep, somewhat excessively drained, with a slight erosion potential;
2) Cajon–Arizo Complex - gravelly sand to gravelly loamy sand, very deep and excessively well drained, with a slight to moderate erosion potential;
3) Cajon – Wasco, Cool, Complex - sand to sandy loam, very deep and somewhat excessively drained to well drained, with a slight to moderate erosion potential;
4) Helendale–Bryman Association - loamy san, very deep and well drained, with a slight erosion potential;
5) Joshua Loam 2 to 5 %: sandy clay loam to sandy loam, moderately deep and well drained, with a slight erosion potential;

6) Joshua Loam 9 to 15 % - sandy clay loam to gravelly sandy loam, well drained, with a slight erosion potential;
7) Mirage Sandy Loam 2 to 5 % - sandy loam to sandy clay loam, very deep and well drained, with a slight erosion potential;
8) Mirage – Joshua Complex 2 to 5 % - sandy clay loam to gravelly sandy loam moderate to very deep and well drained, with a slight erosion potential;
9) Rock outcrop–Lithic Torriorthents Complex - sandy loam to very gravelly sand, shallow and well drained, with a high erosion potential;
10) Sparkhaul – Rock Outcrop Complex 15 to 50% - gravelly sandy clay loam, shallow and well drained, with a slight to moderate erosion potential; and
11) Yermo–Kimberlina, Cool, Association - cobbly sandy loam to gravelly sandy loam, very deep and well drained, with a slight to moderate erosion potential.

b. Biological Soil Crusts

The open space between higher plants is not generally bare of all life. Highly specialized organisms can make up a surface community that may include cyanobacteria, green algae, lichens, mosses, microfungi and other bacteria. Soils with these organisms are often referred to as cryptogramic soils, and form what is referred to as biological soil crusts.

In general, cyanobacteria and microfungal filaments weave through the top few millimeters of soil and aid in holding loose soil particles together forming a biological crust which stabilizes and protects soil surfaces. The biological crusts aid moisture retention, "fix" nitrogen, and may discourage the growth of annual weeds. Below the surface, the soil flora grows various rhizomes, hyphae, and filaments that further bind the soil together. Most biological crust organisms grow during cool moist conditions. The intermountain region of the western U.S. has many-extensive complex crusts. Many of those areas are so fragile that even casual foot traffic can cause extensive damage. The intermountain areas generally have fine textured soils, cooler climates and summer rains which are conducive to crust development.

In contrast, the western Mojave desert has coarse-textures soils, high temperatures, little summer rain and very high potential evapotranspiration potential. According to Belnap (2003, 2005) "less stable, coarse-textured soils often support only highly mobile, large filamentous cyanobacteria (such as *Microcoleus* spp.)." She also observes that (2003 and 2005), "Cyanobacteria heavily dominate crusts of hot desert sites (Sonoran, Mojave and Chihuahuan) where potential evapotranspiration potential is high." She further indicates that some hot desert sites may not support biological crusts (Belnap 2005). The latest data, Belnap (2003 and 2005) and BLM 2001, indicates that the likelihood is that biological soil crusts would be simple crusts that are highly mobile and quick to recover from disturbance.

No formal inventory has been conducted for the presence of biological soil crusts in any of the Stoddard Mountain Allotment grazing units. Based on soils and climatic conditions large filamentous cyanobacteria (such as Microcoleus spp.) can be expected to dominate. Rangeland health determinations have not been conducted on this allotment and no species-specific mapping of the allotment has been conducted for biological crusts. If the grazing lease is renewed, rangeland health analysis would be scheduled for this allotment and biological soil crusts would be inventoried at that time throughout the allotment.

2. Environmental Consequences

a. Impacts of Proposed Action

Under the proposed action, sheep grazing in the Middle Unit would continue to have a negative affect on soils due to temporary but widespread sheep hoof action at the soil surface that leads to minor, localized soil compaction and soil erosion (sheet erosion and rilling) because the plant cover is substantially removed for a time. This effect would be somewhat more noticeable in congregation areas such as bedding and watering sites. Overall, the net effect from hoof action of sheep through an area is to improve the soil medium for future plant growth—for both native and non-native species.

The majority of soils in this grazing unit are anticipated to continue to achieve the soils standard; however, localized OHV and other uses in this Unit can be heavy. These uses may have a long-term negative affect on some soils within this Unit, irregardless of the presence of sheep grazing.

Biological Soil Crusts may also be impacted by sheep grazing. Generally, constant hoof action breaks these crusts down. However, biological soil crusts can withstand disturbances better on coarse-textured soils (Belknap 2003) such as those found on this allotment, provided the disturbance is not constant. Sheep only graze seasonally, and on average every two to three years, which allows recovery time on otherwise undisturbed soils. Therefore, outside of the Open Area, biological soil crusts would be impacted by sheep grazing in the short term, but have not historically and are not likely in the future to be permanently damaged.

Within the Open Area, impacts to biological soil crusts are minimal from grazing, because other uses have already substantially impacted soils and do not provide the opportunity for sufficient recovery time for any biological soil crusts.

b. Impacts of No Action

Under the no action alternative, impacts to soils would be similar to the proposed action except grazing use would continued to be authorized in most of the East Unit and the western portion of the West Unit. This would result in a small increase in the number of bedding and watering sites, and the associated wider geographical scope of short-term soil compaction and erosion impacts, and short-term loss of biological soil crusts.

OHV use in the open area has a substantial negative impact to some soils from compaction and eliminates most biological soil crusts; therefore, the increased scope of impacts would not extend to the East Unit, which overlaps the Open Area.

c. Impacts of No Grazing

Under the No Grazing alternative livestock grazing would not resume. Outside the Open Area, soil disturbance from grazing would end. Therefore, impacts from this alternative would be nominally better than under the other alternatives. Minor soil erosion caused by

sheep grazing would not occur. Biological soil crusts outside of the Open Area would no longer be impacted by sheep grazing in the short-term, and could become more widespread where soil conditions allow and other impacts are not regularly occurring.

No discernible change in impacts to soils or biological soil crusts would occur within the Open Area from the elimination of grazing, because of the amount of regular disturbance that will continue in this area regardless of the presence or absence of sheep grazing.

3. Consultation

Consultation would continue with the lessee, interested publics, and Native American tribes with traditional ties to the lands within the allotment.

4. Maps

None.

5. References

Belnap, J. and O.L. Lange. 2003. *Biological Soil Crusts: Structure, Function, and Management*. Springer, New York.

Belnap, J. 2005. Personal communication.

Chavez, R. 2006. Personal communication. Rangeland Management Specialist, Bureau of Land Management, Barstow Field Office, Barstow, California.

National Resource Conservation Service. 1986. *Soil Survey of San Bernardino County, California, Mojave River Area*.

National Resource Conservation Service. 2004. Interim Report for the Soil Survey of Johnson Valley Off-Highway Vehicle Area, Part of the Mojave Desert Area, West Central Part, California.

K. WASTE, HAZARDOUS OR SOLID

1. Affected Environment

The proposed action or any alternative would have no affect on solid or hazardous wastes on public lands. No known hazardous wastes are present in or adjacent to the Stoddard Mountain Allotment and solid waste dumping is not authorized in conjunction with ephemeral sheep grazing. Occasionally various materials are illicitly dumped in this area—generally either trash no longer accepted at the County landfills (e.g., appliances, couches, tires), or waste oils (many of which are managed as hazardous substances). Periodic cleanups are scheduled in this area to address the trash dumping, and waste oils are disposed of in a timely manner when discovered, after site evaluation. There have been no documented occasions of sheep being the source of or interfering with the management of these wastes.

Agricultural solid wastes are not managed as an environmental contaminant under federal or State law, except at confined animal facilities. Under 41 CFR 261.4 (b), *Identification and Listing of Hazardous Waste*, the EPA has determined that the raising of animals, including animal manures are solid wastes that are exempt from consideration as hazardous wastes if returned to the soils.

Use of agricultural solid wastes, including manure, is managed pursuant to State and local law under RCRA implementing regulations (RCRA Subtitle D). California has issued joint California Integrated Waste Management Board/State Water Quality Control Board regulations (Division 2, Title 27). Use of non-hazardous decomposable waste is generally exempt from these State regulations. The Regional Water Quality Control Board may issue waste discharge requirements or reclamation requirements to cover such materials, and has done so for confined animal facilities such as feed lots and poultry farms but not for unconfined ranching operations. Sheep on the Stoddard Mountain Allotment do not spend extended periods of time in confined facilities (corrals), which are used primarily for shearing and shipping. Since agricultural solid wastes from free-roaming sheep are not managed by federal or State law, any site-specific impacts associated with free-roaming sheep are analyzed in the context of other potentially affected values (e.g., water quality).

L. WATER QUALITY, SURFACE AND GROUND WATER

1. Affected Environment

Surface water sources on the Stoddard Mountain allotment include the Mojave River floodplain and small ephemeral washes. The sheep grazing operation does not graze on or adjacent to the Mojave River. Ephemeral sheep grazing operations do not use surface or ground water in the allotment, and do not congregate near the natural ephemeral washes or other small springs. Therefore, sheep grazing has no effect on water quality or ground water.

M. WETLANDS/RIPARIAN ZONES

1. Affected Environment

The Mojave River, associated ephemeral washes, and small springs are not used by sheep. Other potential riparian or wetland habitat is missing key constituent components due to the amount of disturbance associated with recreational uses. Therefore, there are no effects to wetlands/riparian zones from sheep grazing on this allotment.

N. WILD AND SCENIC RIVERS

1. Affected Environment

The proposed action or any alternative would have no affect on Wild and Scenic Rivers because there are no Wild and Scenic River segments that have been designated or determined eligible for designation on or adjacent to the allotment.

O. WILDERNESS

1. Affected Environment

There would be no affect to wilderness or Wilderness Study Areas because the Stoddard Mountain Allotment is not within or adjacent to designated wilderness areas or Wilderness Study Areas.

P. WILD HORSES AND BURROS

1. Affected Environment

No alternatives would affect wild horses or burros since there are no wild horses or burros, and no wild horse and burro herd management areas are present within or near the allotment.

Q. WILDLIFE

1. Affected Environment

Wildlife habitat quality on the grazed portion of the allotment is at a lower seral stage because of overall naturally low vegetative diversity exacerbated by man-caused disturbances, and because water is scarce. Seasonal grazing by sheep is one of the man-caused disturbances contributing to the low vegetation diversity.

a. Common Animals

Common species of mammals found in the Stoddard Mountain Allotment include woodrats (*Neotoma* spp.), kangaroo rats (*Dipodomys* spp.), white-tailed antelope ground squirrels (*Ammospermophilus leucurus*), black tailed hares (*Lepus californicus*), kit foxes (*Vulpes macrotis*), and coyotes (*Canis latrans*). Common bird species include mourning doves (*Zenaida macroura*), black-throated sparrows (*Amphispiza bilineata*), common ravens (*Corvus corax*), and horned larks (*Eremophila alpestris*). Some common reptiles include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), gopher snake (*Pituophis melanoleucus*), and the Mojave rattlesnake (*Crotalus scutulatus*).

b. *Sensitive Wildlife Species*

Several sensitive or listed species occur within the allotment. Their regulatory status and habitat type are listed in Table 4. Most of these species are avian. These include golden eagle (*Aquila chrysaetos*), LeConte's thrasher (*Toxostoma lecontei*), Bendire's thrasher (*Toxostoma bendirei*), Swainson's hawk (*Buteo swainsoni*), long-eared owl (*Asio otus*), and burrowing owl (*Athene cunicularia*). A portion of the Stoddard Mountain (East Unit) allotment is also within potentially occupied habitat for the BLM-sensitive bighorn sheep (*Ovis Canadensis nelsoni*).

Table 4. Sensitive Wildlife Species within the Stoddard Mountain Allotment

Species Name	Regulatory Status	Preferred Habitat
Bighorn Sheep (*Ovis Canadensis nelsoni*)	BLM Sensitive, California Species of Special Concern	Steep Mountainous Terrain
Golden Eagle (*Aquila chrysaetos*)	BLM Sensitive; California Fully Protected	Mountainous Terrain, Cliffs
Priarie Falcon (*Falco mexicanus*)	California Species of Special Concern	Mountainous Terrain, Cliffs
LeConte's Thrasher (*Toxostoma lecontei*)	California Species of Special Concern	Creosote Bush Scrub, stands of cholla, Joshua trees, and thorny shrubs
Burrowing Owl (*Athene cunicularia*)	California Species of Special Concern	Creosote bush scrub
Swainson's hawk (*Buteo swainsoni*)	California Threaten Species	Mountainous Terrain, Cliffs
Long-eared owl (*Asio otus*)	California Species of Special Concern	Mountainous Terrain, Cliffs

Outside the OHV Open Area, sheep grazing, which is at its peak at the time that birds attempt to nest, could nominally affect any bird species. However, the **burrowing owl** is the species most likely to be directly effected by sheep grazing, since it is a ground-nesting species with nests that can be crushed by sheep hoofs. The **burrowing owl** (*Athene cunicularia*) is a migratory species found on level desert floor habitat. This species is tolerant of urban-fringe habitat, thus seemingly more tolerant of human disturbance than many other bird species. WMP notes that existing records of this species are found in the Stoddard Valley area; specific locale data and confirmed breeding data are scant.

The **desert bighorn sheep** (*Ovis Canadensis nelsoni*) is associated with mountainous terrain and can be found on or near the Stoddard Mountain—East Unit, associated with the Ord-Rodmans population. The allotment contains historic bighorn sheep range, and they may continue to persist on Stoddard Ridge as well as passing through the area.

c. Threatened and Endangered Species

The **desert tortoise** (*Gopherus agassizii*) is federally and state threatened. The desert tortoise was listed as threatened in 1990 by the Fish and Wildlife Service and has been listed as threatened by the California Department of Fish and Game since 1989. The Service designated four critical habitat units (CHU) within the West Mojave planning area in 1994.

Within the Stoddard Mountain Allotment - West Unit there is approximately 41,490 acres of critical habitat for desert tortoise designated by USFWS; the remainder of the allotment is non-critical desert tortoise habitat. The entire West Unit was designated as a DWMA—an ACEC for conservation and recovery of the Desert Tortoise, in the West Mojave Plan (2006). Within the Stoddard Middle Unit, there is approximately 27,522 acres of non-critical habitat for the desert tortoise. Within the Stoddard East Unit, there is approximately 25,515 acres of

critical habitat for desert tortoise, also designated as DWMA in the West Mojave Plan. The remainder of the East Unit is non-critical habitat for the desert tortoise.

In summary, approximately ⅔ of the West Unit and ¼ of the East Unit of the Stoddard Mountain Allotment have been unavailable for grazing since 1991 to conserve the desert tortoise. The remainder of the West Unit was eliminated from grazing with the designation of the Fremont-Kramer DWMA in 2006. The remaining portions of the East and Middle Units are within non-critical habitat for the desert tortoise, and are potentially available for sheep grazing.

The desert tortoise is widely distributed across the California desert and has been observed on all units of this allotment. The Mojave Creosote Bush Scrub type common throughout the allotment is prime desert tortoise habitat. However, in various field surveys that have been conducted throughout the California Desert and specifically within the Stoddard Valley OHV Open Area since the desert tortoise was listed, no high concentration desert tortoise areas have been identified. Moderate desert tortoise concentrations have been reported in the Stoddard Mountain Allotment, West Unit.

Loss of habitat because of OHV activity, raven predation, shootings, and dog attacks contribute to declines in desert tortoise density in the open area. Another change that has adversely affected desert tortoise is the type conversion of vegetation communities within the Open Area. Desert tortoise depends primarily upon native annual vegetation. Because vegetation within the Open Area has been type converted to an almost entirely shrub- and invasives-dominated landscape, rather than a diverse mix of shrubs, perennial forbs, and native annuals, it provides lower quality forage for desert tortoise. Similar declines of the desert tortoise outside of Open Areas are not evident, except immediately adjacent to freeways and other heavily traveled highways.

2. Environmental Consequences

a. Impacts of Proposed Action

Common to all discussion in this section is the fact that sheep impacts are greatest at the bedding and watering locations, which are generally previously disturbed. In addition, regardless of the amount of impact, especially removal of vegetation, not all areas are temporarily denuded and large areas of relatively undisturbed habitat within the allotment and around the allotment perimeter are always available to wildlife. Nearly all wildlife are mobile enough to sustain themselves on the less impacted or intact habitat.

Common Animals

Most common wildlife species are mobile and can avoid being trampled by sheep. Impacts to wildlife are typically indirect. Sheep may impact wildlife indirectly by modifying habitat on which wildlife depend as they disrupt soils and damage vegetation. Soils are impacted through hoof shearing and by soil compaction. Vegetation can be removed if trampled or overgrazed. Impacts identified above typically are most concentrated near bedding and watering sites where sheep congregate. Common animals that thrive on low seral, invasive

vegetation benefit from sheep grazing; these include ants, some lizards, some small mammals, and snakes.

Sensitive Wildlife Species

Outside the Open Area, sheep grazing, which is at its peak at the time that birds attempt to nest, could adversely affect all bird species nominally. However, the **burrowing owl** is the species most likely to be directly or indirectly affected by sheep grazing, since it is a ground-nesting species with nests that can be crushed by sheep hoofs. No cases of sheep-caused burrow collapse or nest loss have been documented in the allotment. Sheep grazing in the Open Area is unlikely to result in substantial effects to burrowing owls or other birds due to other substantial disturbances that make the Open Area a generally unattractive place for successful nesting.

Impacts would not occur to **desert bighorn sheep** under the proposed action because domestic sheep would be excluded from the portion of the allotment (the East Unit) where overlap in use between domestic and bighorn sheep could occur. Although within the radius of occupied habitat for bighorn sheep, the Middle Unit is separated from occupied habitat by I-15. The I-15 is one of the busiest interstate highways in the western U. S., and includes barb-wire fence on both sides of the highway, six lanes of busy traffic and K-rails located in the median between north and south bound lanes. This represents a substantial barrier to prevent contact between domestic and bighorn sheep.

Threatened and Endangered Species

Outside the Open Area (within the DWMA and the Mojave Monkeyflower Conservation Area), the **desert tortoise** benefits somewhat from the exclusion of sheep grazing because annual vegetation upon which the desert tortoise depends is conserved for this species. Within the OHV Open Area, there would be negligible benefit to desert tortoise from exclusion of grazing under the proposed action, due to intense, regularly-occurring impacts that are not related to sheep grazing.

Outside the DWMA and the OHV Open Area, the requirement that ephemeral vegetation exceed 230 pounds per acre before sheep are allowed to graze in desert tortoise habitat is intended to avoid competition between livestock and (desert) tortoises in years of poor rainfall and plant growth (WMP 2005). However, in years of poor rainfall and plant growth, it is unlikely that the lessee would request, or be authorized, to turn out sheep for ephemeral grazing, since ephemeral grazing only has a positive cost/benefit ratio for the lessee when forage production is substantially higher.

Literature regarding direct and indirect impacts of livestock grazing to rangeland and desert tortoise habitat has been critically reviewed in an unpublished document by the U. S. Geological Survey (USGS) (Boarman 2002). The critical review analysis reported a paucity of information available on the effects of grazing on the Mojave ecosystem. A brief summary of that review follows.

Indirect impacts to tortoise habitat were evaluated by reviewing studies on livestock grazing effects on plant communities in other arid and semi-arid regions. Direct impacts were

evaluated by reviewing reported observations and anecdotes. Potential indirect impacts from livestock grazing include uprooted and trampled vegetation and reduced annual forbs resulting in an altered plant community structure, increased soil compaction and erosion, reduced soil infiltration, and increased fugitive dust, primarily localized to concentration areas.

Little information was reported describing direct impacts to tortoises except that some accounts reported that livestock may step on and crush juvenile tortoises. In addition, it has been reported that livestock have crushed tortoise burrows resulting in injured tortoises or a damaged burrow. In-depth research on the direct impacts of livestock grazing on tortoise is lacking.

The proposed action would authorize sheep grazing only on a portion of the Stoddard Mountain, Middle Unit. Desert tortoises are known to occur in this grazing unit in low densities. The proposed action would not likely change the amount of, or potential for, these seemingly rare direct impacts in this Unit, which are more likely to result from cattle grazing rather than sheep grazing.

b. Impacts of No Action

Under the No Action alternative, impacts to wildlife would be the same as those described under the proposed action, with the following modifications or exceptions. For common and sensitive bird species, the impacts from sheep grazing – within and outside of the Open Area – would be the same as the proposed action except that the geographical scope of the minor impacts described under the Proposed Action would occur over a broader geographical scale under this alternative.

The direct and indirect impacts to desert tortoise would be slightly greater under this alternative because sheep grazing would also occur on relatively undisturbed habitat in the western portion of the West Unit, and low desert tortoise habitat in the Mojave Monkeyflower Conservation Area and the East Unit (within the OHV Open Area).

Impacts from sheep grazing within Mojave Monkeyflower habitat might adversely affect the long-term viability of this species due to its limited range and small number of locations; however, research on the long-term effects of sheep grazing on the Mojave Monkeyflower has not yet occurred.

Finally, domestic sheep grazing would be permitted in the East Unit, which overlaps desert bighorn habitat. Desert bighorn sheep do not typically occupy the same habitat as domestic sheep. Domestic sheep generally inhabit alluvial fans and valleys and are not herded into higher elevation, rocky slopes preferred by bighorn sheep, because they are more difficult to herd in those areas and forage is less plentiful. However, sheep grazing can impact desert bighorn indirectly because of competition for food since bighorn sheep may have overlapping food preferences. Bighorn sheep occur in the southern portion of the Stoddard Mountain Allotment (East Unit) on steep terrain, and do most of their browsing in that area. Domestic sheep grazing typically occurs in the northern portions of the allotment on alluvial fans and among areas more frequently used by OHV recreationists, where bighorn sheep are unlikely to occur.

In addition, the potential interaction between domestic and bighorn sheep may result in increased potential for the spread of diseases. The extent of this potential to spread disease and how it impacts the bighorn sheep population as a whole is unknown, due to small sample sizes in studies and the presence of other factors impacting the sheep populations. In general, no change in desert bighorn density along Stoddard Ridge has been linked to disease. The relative impacts of sheep are small compared to those from OHV use, which can and have permanently displaced or depleted the bighorn from parts of its range.

c. No Grazing

Under this alternative ephemeral sheep grazing would no longer be authorized. Impacts to wildlife from sheep grazing would cease. The overall beneficial impacts from this would be minimal because other uses would continue to impact the wildlife populations.

3. Consultation

The BLM has formally consulted with the U.S. Fish and Wildlife Service on various occasions regarding ephemeral sheep grazing in desert tortoise habitat. The BLM is proposing to issue grazing leases under the terms and conditions contained in the 2006 Biological Opinion, which contains terms and conditions from the 1994 Sheep Grazing Biological Opinion (1-8-94-F-16) issued March 15, 1994. Under the No Action alternative, the terms and conditions of the original 1994 biological opinion would be enforced (1-8-94-F-16). These terms and conditions are not substantially different with respect to listed wildlife species for the Stoddard Mountain allotment.

4. Maps

Maps 1 and 3.

5. References:

Boarman, W. I. 2002. Threats to desert tortoise populations: A critical review of the literature. Unpublished report prepared for the West Mojave Planning Team, Bureau of Land Management. U. S. Geological Survey, Western Ecological Research Center. San Diego, CA.

Fish and Wildlife Service. 1994. Biological opinion for Ephemeral Sheep Grazing in the California Desert District (1-8-94-F-16). March 15, 1994. Ventura Fish and Wildlife Office, Ventura, California.

U.S. Bureau of Land Management. 2005. *Final Environmental Impact Report and Statement for the West Mojave Plan and California Desert Conservation Area Plan*. California Desert District. Moreno Valley, California.

R. VEGETATION/INVASIVE, NON-NATIVE SPECIES

1. Affected Environment

a. General Vegetation Communities

The vegetative communities within the Stoddard Mountain Allotment vary with elevation, available water, soils, slope and annual precipitation. Terrestrial natural communities have been mapped using the classification used by Holland et al. The primary plant community occurring within the affected area is Mojave Creosote Bush Scrub which is the characteristic plant community of the Mojave Desert. Other communities include Desert Saltbush Scrub (Allscale Series) and Mixed Mojave Scrub. Following is a description of the three key plant species or plant communities which may be affected.

- The Mojave Creosote Bush Scrub - This community occurs from 75 meters below sea level to 1000 meters above sea level, in well drained soils found on alluvial fans, bajadas and upland slopes. The dominant perennial species in a Creosote Bush Scrub plant community is the creosote bush (*Larrea tridentata*) which is also the most abundant shrub in the California Desert. Creosote Bush Scrub plant community diversity is characteristically low to medium. Some associated plant species in this community include white bursage (*Ambrosia dumosa*), Ephedra species (*Ephedra* sp.), and desert senna (*Senna armata*). Desert washes that occur within this community support additional species, the most common being the catclaw acacia (*Acacia greggii*) and desert willow (*Chilopsis linearis*).

- The Desert Saltbush Scrub (Allscale Series) - This community occurs between 75 meters below sea level to 1500 meters elevation on old lake deposits, dissected alluvial fans and rolling hills. The Allscale Series is comprised primarily of the dominant Atriplex species (*Atriplex ploycarpa* and *Atriplex spinifera*) and associated species like bladderpod (*Isomeris arborea*), bush buckwheat (*Eriogonum fasciculatum*), California ephedra (*Ephedra californica*), cheesebush (*Hymenoclea salsola*), and paleleaf goldenbush (*Isocoma acradenia*).

- The Mixed Mojave Scrub - This community occurs between 300-1500 meters elevation on all slopes in shallow and deep soils that are occasionally rocky. The Mixed Mojave Scrub community is comprised primarily of the dominant Yucca species (*Yucca schidigera*, *Yucca bacata*) and associated species like winter fat (*Kraschenninnokovia lanata*), boxthorn species (*Lycium* sp.), spiny menodora (*Menodora spinescens*), spiny hopsage (*Grayia spinosa*) and cacti species (*Opunita sp.*, *Mammallaria sp., Echinocactus sp.*, *Ferocactus sp., Echinocerus sp.*).

Monitoring conducted on this allotment indicates that vegetation community type conversion has not occurred within the sheep allotment outside of the Stoddard Valley OHV Open Area.

Production can vary from 200 lbs./acre to 1,200 Ibs./acre. Typically, the woolgrowers won't make application for grazing until production is at least 500 lbs./acre. The average stocking rates over the last ten years for this allotment have been approximately 2,000 sheep with an equal number of lambs. When carrying capacity is calculated, only 10% of the available

forage is allocated to sheep grazing. A key grazing stipulation for ephemeral sheep grazing is the "one-pass rule." A band of sheep may use an area only once during that grazing season. There are other grazing stipulations that limit how long a camping and watering sites can be used and how far the next one has to be from the previous site.

b. Sensitive Plant Species

One sensitive plant is known to occur on lands proposed for sheep grazing. This species, its regulatory status, and habitat are listed in Table 5. This species occurs within the Stoddard Mountain Allotment, Middle Unit where appropriate habitat can be found.

Table 5. Sensitive Plant Species on the Stoddard Mountain Allotments

Species Name	Regulatory Status	Habitat
Mojave Monkey Flower – *Mimulus mohavensis*	BLM Sensitive	Granitic soils, gravelly banks of desert washes

This species has a limited geographical range with two known concentration areas in the West Mojave. The WMP designated one of these concentration areas, including 10,633 acres within the Stoddard Mountain Allotment—Middle Unit as the Mojave Monkeyflower Conservation Area (ACEC).

c. Invasive, Non-Native Species

Overall, the density of non-native invasive species on the allotment is considered moderate and non-native species density is generally greater than native forbs in portions of the Stoddard Valley OHV Open Area, where disturbances are more frequent. Red brome (Bromus madritensisi ssp. rubens), schismus (Schismus arabicus), filaree (*Erodium cicutarium*), and several mustard species are the four most widespread invasive species present in the allotment. These species flourish during the wetter years (usually associated with El Nino winter rains), which coincide with years when sheep are allowed to turn out. In ephemeral sheep operations that occur in the Mojave Desert these non-native species can represent the bulk of forage species used by sheep in the spring.

Invasive, non-native species compete with native herbaceous species, especially annual species, for available moisture, nutrients, and spatial occupation of available upland habitat. Densities of these species vary widely. Repetitive ground disturbance associated with OHV use creates ideal habitat for invasive and non-native species. The disturbance created by sheep grazing occurs on this allotment intermittently, on average one out of every two-to-three years (years when sheep are turned out), and is exacerbated by the ongoing disturbances from continuous, unrestricted OHV use in the Open Area, and higher OHV use adjacent to private lands west of I-15. In these areas, the relative density of invasive and non-native species is generally much greater than native forbs.

2. Environmental Consequences

a. Impacts of Proposed Action

The proposed action has minor impacts on availability of vegetation to native wildlife, including sensitive species, and negligible impacts to overall vegetation community composition outside of the Open Area and adjacent lands, on a short-term basis. The proposed action eliminates sheep grazing in the Mojave Monkeyflower Conservation Area to prevent browsing of the Mojave Monkeyflower in this area. Suitable habitat for the Mojave monkeyflower also exists outside of the MMFCA in the Middle Unit. Sensitive plants typically have limitations in habitat needs and occur in localized areas. How sheep may impact these species would likely depend on access to habitat where these species occur as well as the intensity of grazing. Outside of the Conservation Area, sheep may impact individual plants by consuming them or trampling them.

In addition, sheep grazing would not occur within DWMA. This removes the potential for direct competition for ephemeral forage with the desert tortoise, and it protects native perennial forage and shrubs associated with critical habitat for the desert tortoise. Outside DWMA and critical habitat, direct competition for ephemeral forage is a negligible factor. Indirect impacts to vegetative communities (type conversion) may be accentuated by sheep grazing depending on seasonal, climatic, and other site factors, under the Proposed Action. However, the impacts from sheep grazing are nominal since these are areas already moderately to heavily impacted by other uses.

Ephemeral sheep grazing takes advantage of high production, ephemeral blooms when they occur. In the Stoddard Mountain Allotment, the bulk of the production consists of non-native annuals. Within the majority of the allotment still available for grazing under the Proposed Action, the widespread re-establishment of native herbaceous vegetation is unlikely due to factors other than sheep grazing. Therefore, the impacts to native vegetation from the Proposed Action are short-term and limited in scope. Long-term impacts are negligible.

<u>Invasive, Non-Native Species</u>

Outside the Open Area, the effects on non-native species vary by time of year. In early season, sheep tend to devour the non-natives before they can make seed, thus lowering their overall biomass and the number of non-native seeds that enter the seedbank. In the late season (after the plants have flowered and made seed), the sheep spread weed seed into areas not previously infested by carrying the seed in their wool and by depositing still-viable seed in their droppings. Both beneficial and adverse impacts are highest and most long-lasting at the sheep bedding and watering locations, depending on when used. The overall impacts of the proposed action are that invasive, non-natives would remain static in the Middle Unit still available for grazing, but may contribute to local spread of non-natives.

As mentioned previously, the re-establishment of native herbaceous vegetation is unlikely in the remaining portions of this allotment due to other ground disturbing activities like OHV. Although the Middle Unit is not within an OHV Open Area, OHV use can be heavy on a given weekend. Overall, the current densities of non-native invasive species in the Middle Units of this allotment are considered moderate to heavy. Annual fluctuations in densities

are directly influenced by the amounts of late winter and early spring precipitation, however these species are concentrated in the seed banks also and therefore their populations only increase with flowering non-native plants.

b. Impacts of No Action

Under the no action alternative, impacts to vegetation would be similar to the proposed action except that the scope of minor impacts to vegetation communities would be over a larger area, and the Mojave Monkeyflower would be susceptible to direct and indirect impacts in the Mojave Monkeyflower Conservation Area. These impacts have not had permanent adverse effects to the Monkeyflower to date, but may have long-term impacts to the potential viability of the species, if they accelerate vegetation community conversion, in conjunction with other uses that promote conversion to non-native species.

Under this alternative, the impacts from invasive, non-native species would be the same as the proposed action.

c. Impacts of No Grazing

Outside of the Open Area and other moderate to high use areas, the no grazing alternative would result in increased availability of ephemeral vegetation to native wildlife, including sensitive wildlife species. Impacts to overall vegetation community composition due to elimination of grazing are not anticipated. Within the majority of the allotment still available for grazing, the impacts are the same as other alternatives—re-establishment of native herbaceous vegetation is unlikely due to factors other than sheep grazing.

Impacts to critical desert tortoise habitat and the Mojave Monkeyflower in the Conservation Area would be the same as the Proposed Action. Any potential for impacts to individual Monkeyflower plants outside of the conservation area would be eliminated.

<u>Invasive, Non-native species</u>

Under this alternative, there may be a short-term increase in the number of non-native plants that flower and produce seed and an increase in the density of seed in the seed bank. When sheep graze ephemeral rangelands they consume a portion of the total non-native vegetation produced prior to seed dissemination, thus reducing the overall above ground biomass and the amount of seed entering the seed bank. Later in the growing season sheep grazing can also spread weed seed into areas previously not infested by caring weed seed in their digestive track and on their wool, this would longer occur under this alternative.

Ephemeral sheep grazing would no longer be authorized in the Middle Unit. Over time, the native perennial plant communities may out compete most of the non-native species, not allow expansion of those populations and bring more stability to the site. There would be minimal change to the western portion of the West Unit because grazing has been infrequently authorized since 1990.

Elimination of sheep grazing in the East Unit, which is within OHV Open Area, would have a negligible effect on the amount of non-native vegetation in the unit, which is expected to continue to spread.

3. Consultation

Consultation has been initiated and would continue with the lessee, interested publics, and Native American tribes that have an interest in biological resources within the Stoddard Mountain Allotment.

4. Maps

Map 4.

5. References:

Boarman, W. I. 2002. Threats to desert tortoise populations: A critical review of the literature. Unpublished report prepared for the West Mojave Planning Team, Bureau of Land Management. U. S. Geological Survey, Western Ecological Research Center. San Diego, CA.

U.S. Bureau of Land Management. 2006. West Mojave Plan Amendment. Moreno Valley, CA.

CHAPTER 4: CUMULATIVE ANALYSIS

Bureau of Land Management regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed. CEQ regulations implementing the procedural provisions of NEPA define cumulative effects as: "The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." (40 CFR 1507)

This cumulative analysis tiers off of the Cumulative Analysis found in the West Mojave Proposed Plan/Final Environmental Impact Statement (January 2005) for San Bernardino County and adjacent areas. The cumulative analysis in this document therefore does the following:

- Briefly summarizes the West Mojave cumulative analysis as it relates to grazing issues;
- Focuses on information from activities other than grazing specifically occurring within the Stoddard Mountain Allotment and that may contribute to cumulative effects from the proposed action or alternatives, as appropriate, and
- Discusses resource-specific cumulative effects for the Stoddard Mountain Allotment.

Where there has been no change in the previous analysis the conclusions of the previous document are briefly summarized and the reader is referred to the West Mojave Proposed Plan/FEIS for more detail.

A. Summary of West Mojave Plan Cumulative Analysis

The West Mojave Plan described the current environment of the planning area as having been broadly influenced by past activities occurring prior the passage of FLPMA in 1976, such as development of major highways, railroads, and communities in the region. Other important activities related to the baseline condition of the planning area have included the Land Tenure Adjustment Program, mining, military use, recreation, lands actions, wildfire, special area designation and management, and livestock grazing (Proposed Plan/FEIS, Chapter 3).

West Mojave Plan further addressed recent and reasonably foreseeable future changes in land use resulting from FLPMA and other resource management related laws, including State and Federal Endangered Species Acts and the California Desert Protection Act, and the Fort Irwin expansion legislation (Proposed Plan/FEIS, pages 4-135 to 4-141). West Mojave Plan considered BLM's six CDCA regional plan amendments that were approved or under preparation as key determinants of environmental conditions (Proposed Plan/FEIS, pages 4-139 and 4-140).

The West Mojave Plan specifically recognized the cumulative conservation benefits of other past actions by Congress in setting aside large areas within the CDCA for parkland, non-surface disturbing military use, the desert tortoise natural area, and wilderness. The plan recognizes the benefits derived from designation by US Fish and Wildlife Service of millions of acres of critical habitat in the CDCA. In addition, the West Mojave plan identified

benefits resulting from the implementation of management actions established under BLM land use planning for six regional plan areas in the CDCA.

In the West Mojave planning area, these benefits included mineral withdrawals, voluntary grazing relinquishments, elimination of ephemeral grazing within DWMA, and ACEC management for special status species. The plan also acknowledged cumulative adverse impacts, particularly to wildlife in incidental take areas from factors such as urban-interface conflicts, use within adjacent OHV Open Areas, and the Fort Irwin expansion.

The West Mojave Plan discusses factors that affect both forage availability and use, and grazing use in livestock allotments, including the Stoddard Mountain sheep grazing allotment, as well as the cumulative effects of grazing management in the region. These effects are discussed relative to past, present, and reasonably foreseeable actions that would occur as a result of grazing management within the parameters of the West Mojave Plan.

Cumulative effects for the following resources and activities/uses are identified in the West Mojave Plan that also affect or are affected by grazing in the Stoddard Mountain grazing allotment: habitat/vegetation and invasive species; wildlife, including desert tortoise and desert bighorn sheep; soils, cultural resources; OHV use in OHV Open Areas, vehicle access; environmental justice, and socioeconomic resources. In addition, new legislation facilitating alternative energy development and expansion of energy corridors, as well as other large-scale resources or uses specific to the Stoddard Mountain Allotment are addressed in this cumulative analysis. The cumulative treatment will focus on how the adoption of the **Proposed Action** would modify the cumulative effects with respect to these factors.

The cumulative effects region for effects of grazing management for the Stoddard Mountain Allotment and other past, proposed, and reasonably foreseeable actions varies by resource as noted herein. There are two main analytical frameworks considered in this cumulative effects analysis of grazing management in the Stoddard Mountain Allotment:

- Grazing management activities or activities with similar impacts to grazing management (those activities that can or do modify forage availability and public land health) that are occurring within the Stoddard Mountain grazing allotment and the cumulative effects region;
- Other activities within the Stoddard Mountain Allotment that similarly affect (as does grazing management) specific resource values and uses.

B. Past, Present, and Reasonably Foreseeable Actions affecting the Stoddard Mountain Allotment

One of the CDCA Plan (1980) decisions included designations of allotments and, where appropriate, associated levels of AUM (numbers of animals). Most of the sheep grazing allotments, including Stoddard Mountain, were designated as ephemeral, with a maximum number of animals that would be permitted in any grazing season. That is, in any grazing season depending on forage production and availability, anywhere from 0 to the maximum number of animals might be permitted. Livestock allotments and associated animal numbers were reviewed in the West Mojave Plan (2005) and other bioregional plans in southern California and in some cases, boundaries or uses were modified or eliminated and AUM was

adjusted.

In addition to the activities discussed in the cumulative effects analysis in the West Mojave Plan, there have been substantial actions and proposals that have resulted in or have the potential to add to cumulative impacts for one or more resources being affected by grazing management in the Stoddard Mountain Allotment. A listing of the most substantial of these follows. Whether or not these are individually mentioned, they have or have the potential to contribute to cumulative effects, based on the amount of land base they may affect or change in land use they could produce, not only within their boundaries, but regionally (at least indirectly).

- **designation and subsequent recreational activities and land tenure adjustments, associated with the Stoddard Valley OHV Open Area,**
- **unauthorized sheep grazing by "coyotes",**
- **wind energy testing,**
- **expansion of the R-2508 and R-2515 military flight corridors,**
- **approval and subsequent development of a high-speed rail corridor.**

The BLM's multiple use mission typically results in a variety of activities that are authorized to occur on the same lands, consistent with designations for geographic-specific planning units within the land use plan (California Desert Plan, 1980, as amended). Activities that overlap the Stoddard Mountain Allotment include off-highway vehicle (OHV) Open Area organized and casual use, casual recreational activities outside of the OHV Open Area (i.e. hunting, picnicking, camping, hiking, motor-vehicle touring and rock hounding), use of Utility Corridor H designated in the 1980 California Desert Plan, multiple Stoddard Mountain communication sites, wind energy testing, small mining operations, and scientific study. Many activities were occurring in some manner or in existence prior to the development of the CDCA land-use plan, such as the historic LADPW power lines in utility corridor H that link Los Angeles and Las Vegas, small mining exploration and development activities, and casual-use recreation activities.

The Bureau minimizes disturbances through the planning and associated NEPA process as well as through subsequent site-specific NEPA compliance. With respect to planning decisions, all areas are designated based on the spectrum of resource use vs. resource protection within the multiple-use mandate of FLPMA. In addition, resource-specific allocations have been made across broad landscapes in the land-use plan.

For instance, large linear utility projects have been identified for co-location in specific designated utility corridors to minimize potential surface disturbances outside of those corridors. Routes of travel have been designated for casual recreational vehicle use to minimize off-route impacts. OHV Open Areas, such as the Stoddard Valley OHV Open Area, have been designated for organized and intensive recreational uses and other activities compatible with those recreational uses. Other areas have been identified for sensitive resource protection, special management actions beyond those identified in the CDCA Plan, or to define parameters for areas with potentially conflicting uses.

Cumulative effects to the Stoddard Mountain allotment have primarily resulted, either directly or indirectly from OHV use, and from designation and use of the Stoddard Valley

OHV Open Area. These actions have resulted in substantial changes to a broad spectrum of environmental resources, including vegetation communities, diversity and abundance of wildlife, soil disturbance and erosion potential, and other factors that sheep grazing may also impact.

Mining operations in the California Desert Conservation Area generally require a plan of operations regardless of size, and in any event, where a SMARA plan is required (over 1 acre). Military flight corridors were identified in association with the West Mojave Land Tenure Program, to minimize development conflicts within important military training areas. In addition, several livestock allotments were identified and allotments were designated for particular landscapes, including numbers and types of livestock, types of forage management, and grazing seasons of use.

The Stoddard Mountain sheep allotment was one of the allotments designated in the CDCA Plan. At that time, range condition was listed as good, but other factors identified included ongoing recreational use and unauthorized sheep grazing. Designation of the Stoddard Valley OHV Open Area and increased monitoring of rangelands were implemented to provide parameters and maintain or improve range conditions. Subsequently, new parameters were identified through the West Mojave Plan that have been incorporated into the current proposed action for the Stoddard Mountain allotment.

Impacts from grazing management may be short term (for example, impacts resulting from camp and bedding areas or actual forage use) and long term (impacts resulting from recurring hoof action to area soils). Both the short-term and long-term impacts are consistent with the analysis of the West Mojave Plan. When added to effects identified in the West Mojave Plan and effects of other actions on the allotment, the cumulative impact of the proposed action would not be significant as summarized below.

C. Resource-specific Cumulative Assessment

This environmental assessment concludes that no significant impact would result from the proposed grazing permit renewals or other alternatives. Impacts to the following 11 critical resources and other resource uses and values of the human environment are minimal, as described below:

1) Areas of Critical Environmental Concern. Affects to specific resources within ACEC that would not affect importance or relevance for ACEC designation are discussed under the appropriate topic.
2) Protection of Native American values has not been identified by tribes as an issue during consultation. Concerns about prehistoric cultural sites were identified by one of the tribes, and are addressed under cultural resources.
3) Prime or unique farmlands are not present within the allotment.
4) Floodplains are not utilized by sheep within the allotment.
5) Riparian areas and wetlands are not present within the allotment.
6) Permanent or ephemeral natural water sources are not present in the allotment where the sheep graze, and there are no range improvements for the sheep. The Mojave River is outside the allotment boundaries, and other ephemeral waters that run through the allotment are not utilized by the sheep. Water is trucked in to mobile camps for the animals. Animals are constantly on the move and do not create

concentrated areas of droppings. Therefore, there are no impacts to water quality from sheep grazing.

7) Hazardous or solid wastes are not present, based on federal and State regulations that are associated with grazing.
8) Designated or eligible Wild and scenic river segments are not present.
9) Wild horses and burros are not present.
10) Air quality impacts are not contributing to air quality exceedances under any alternatives and are consistent with the State Implementation Plan.
11) Wilderness areas or wilderness study areas are not present.

Impacts described in this EA include insignificant impacts from the Proposed Action to livestock grazing, biological resources, invasive species, soils, cultural resources, environmental justice, recreation, and social and economic values. These impacts have been determined to be insignificant because both the short-term and long-term impacts are consistent with the analysis of the West Mojave Plan, contributions from grazing are insubstantial as compared to other effects that contribute to cumulative impacts, and adverse cumulative effects have been offset by substantial positive strategies identified in the West Mojave Plan. When added to effects identified in the West Mojave Plan and effects of other actions on the allotment, the cumulative impact of the proposed action would therefore be insignificant as summarized below:

1. Grazing Management

The Proposed Action and No Grazing alternatives for the Stoddard Mountain allotment would have a small negative present and reasonable foreseeable future cumulative impact on the livestock industry in the Mojave Desert by adding to the current trend of reduced ranching presence on a regional basis. There are no identified long-term cumulative impacts to livestock grazing from the implementation of the proposed action. In the Stoddard Mountain Allotment, an additional 90,000 acres of public lands would be unavailable to ephemeral sheep grazing due to grazing restrictions contained in the WMP. This is in addition to the loss of use in ⅔ of West Unit and ¼ of the East Unit after listing of the species and subsequent long-term loss of the same area after the designation of critical habitat.

Regionally, past limitations on grazing since the listing of the desert tortoise as a threatened species have led to substantial loss of potential forage availability in the West Mojave, including the elimination of use of several allotments. However, the larger regional effects of reduced agriculture and ranching in the West Mojave and regionally in the west, is primarily the result of economic and development pressures unrelated to the proposed action. The changes identified in the proposed action are not anticipated to substantially contribute to these regional cumulative effects on the ranching industry.

The overall cumulative effect of this trend is substantial within the sheep-growing industry in southern California. Regional changes that have occurred in addition to the Proposed Action include elimination of 300,000 acres of sheep grazing areas since the approval of the CDCA Plan. In addition, reasonably foreseeable future limits to the industry are occurring or are anticipated based on resource protection on both public and private lands, current and future urban development, and other potential factors limiting available sheep-grazing land in the West Mojave and surrounding areas.

Ephemeral sheep grazing has occurred at some level in the Stoddard Valley area for the past 80 years. The Proposed Action and No Grazing alternatives would have a moderate and the No Action alternative would have a small negative present and reasonable foreseeable future cumulative impact on the livestock, and in particular the sheep industry in the Mojave Desert. This impact is due to cumulatively adding to the current trend of reduced public land forage availability and ranching presence on a regional basis. The impact of the Proposed Action or No Grazing Alternative is relatively large on an individual basis, given the overall downward trends of local ranching as a segment of the economy and historic settlement of the region, and the relatively few remaining operations. However, it is not a significant trigger or accelerant of the decline of ranching industry, because it is unlikely any reasonable strategy can reverse the overall trend away from agriculture and ranching in the region.

2. Biological Resources

The past, present, and reasonable foreseeable future cumulative impacts of sheep grazing on plants and wildlife in the West Mojave Bioregion are anticipated to decrease due to the implementation of the Proposed Action and other measures within the West Mojave Plan. The proposed voluntary relinquishment of one cattle and three sheep grazing allotments totaling over 248,000 acres, and elimination of ephemeral sheep grazing in portions of 4 other sheep grazing allotments would reduce the overall cumulative impacts of grazing to biological resources in the West Mojave. Overall, over 300,000 acres of public lands is no longer be grazed by sheep because of biological opinions since desert tortoise listing and the West Mojave Plan.

Some loss of plants and wildlife will still occur from sheep grazing. Slower, less mobile wildlife species may not be able to escape being injured or killed by sheep, particularly in sheep bedding areas, or may be lost because of set-up and use of temporary camps. Some plant species, particularly attractive sheep browse species, will suffer reduced growth and depending upon browse timing (before or after seeding) reduced reproduction potential.

These losses are small when compared to those that may occur from other desert activities, such as direct mortality and vegetation loss from fast moving recreational vehicles in and around the allotment or construction-related losses from the use of heavy equipment in and around the allotment.

Indirectly, casual and organized OHV use, construction, and related activities have the potential to degrade habitat by removing vegetation, compaction of soils and elimination of microclimates that facilitate re-vegetation. Habitat is impacted by recreational vehicles in localized areas where favorite trails or hill climbs exist, at OHV staging areas, and at well-used camping areas. A power line crossing the allotment has resulted in the loss of habitat for construction and an associated maintenance route. Past mining activities have resulted in one moderately large localized area of intense disturbance and several small localized disturbances within the allotment. Rural development on adjacent private lands has also resulted in habitat loss.

Grazing in sheep concentration areas contributes to the localized adverse effects to wildlife habitat. Rehabilitation of localized disturbances occurs more quickly in the moister, more

productive portions of the Stoddard Mountain Allotment than in hotter and dryer parts of the West Mojave. With the exception of the unreclaimed mine site, these localized impacts have not resulted in substantial adverse damage to wildlife habitat.

Wildfire has resulted in short-term and long-term impacts in the allotment and has been a recurring part of the ecological system due to favorable climatic conditions. Although, natural wildfire is an expected occurrence in these vegetative communities, several factors have contributed to increased frequency and extent of wildfire. Primary factors are risks from growing population centers and increasing numbers of arson fires. Other factors include permanent changes to vegetation communities due to slow fire recovery, and increasing non-native invasive populations. Wildfire has had a recurring and cumulatively significant adverse affect on wildlife habitat in the West Mojave bioregion. Other impacts may indirectly contribute to wildfire occurrence and severity, including grazing management, but the overall effect of grazing on wildfire has been negligible when compared to other factors.

Development losses have been partially offset by areas set aside for wilderness and programs to consolidate lands west and northwest of I-15. This land tenure program to consolidate public lands in the West Mojave region was approved in 1991 and has been subsequently implemented and further expanded in the WMP. Public lands in these areas receive little surface disturbance and provide good habitat for many wildlife species. This program has resulted in protection of substantial high-value desert tortoise and Mohave ground squirrel habitat from potential development that could result in major habitat loss.

The designation of routes in the West Mojave planning area will reduce cumulative impacts, including direct wildlife losses, long-term habitat degradation, and spread of invasive species. Particularly positive are the reduced impacts from the closure of substantial mileage of routes in the West Mojave Plan. In excess of 2,200 miles of routes in the West Mojave region would no longer be accessible by motor vehicle. Not only are rehabilitated areas improved, but also additional areas that are no longer readily accessible by vehicle are improved, both directly through natural revegetation and indirectly through the elimination of a major vector (OHVs) for surface disturbance and the spread of non-native invasives species.

Most biological components of rangeland health are substantially less affected in ephemeral sheep allotments than in perennial allotments because (1) no sheep use is permitted and thus no forage is utilized unless forage is prolific and readily available and (2) ephemeral sheep lessees generally do not rely on natural water sources for their animals. This is the case in Stoddard Mountain allotment. Sheep grazing affects two important rangeland health factors—invasive, non-native species and soils, including biological soil crusts. These are addressed separately below.

3. Invasive Species

Past and present grazing practices are one of several activities that have negatively impacted native plant communities on grazing allotments in the West Mojave, including within the Stoddard Mountain allotment. The spread and establishment of non-native invasive species occurs through a variety of man-made and natural mechanisms, including grazing or other

disturbances, which promote fast growing pioneer species that flourish during the early seral stages of vegetation communities.

Sheep contribute to non-native species spread by eating and redepositing non-native species, by providing soils disturbed by hoof action in which seeds can flourish, and to a lesser extent, by direct disturbance, particularly in bedding and camp areas. Sheep grazing also provides biological control of some of the more invasive weed species through consumption of those species before they can set seed. Net effects of sheep grazing are generally positive or neutral in less disturbed areas and neutral in areas that are more disturbed, in the short-term.

As discussed above, there are other activities such as casual and organized OHV use and construction activities that occur on public land that contribute to the degradation of native plant communities on an ongoing basis, particularly in and adjacent to the OHV Open Area. Fragile plant communities require periodic rest from anthropogenic pressures to maintain long-term stability. The effects of sheep grazing in (No Action alternative) or adjacent (Proposed Action and No Action) to the Open Area, both short-term and long-term, are nominal as compared with ongoing effects to native plant communities from OHV activities.

Adverse impacts from sheep grazing are substantially offset by the permanent elimination of sheep grazing in DWMA and the Mojave Monkeyflower Conservation Area, an ongoing program for management of invasives, implementation of route designation, and activities and parameters on permits and leases to minimize the potential for non-native establishment and recruitment. These actions would allow recovery from sheep-related anthropogenic pressures where sheep grazing would no longer be authorized and during intermittent years when no ephemeral use is authorized. Therefore, long-term impacts from sheep grazing to invasive, non-native species are considered nominal in the Stoddard Mountain allotment.

4. Soils

The past, present and reasonably foreseeable future sheep grazing operations will continue to have a localized, short-term impact on soils in sheep allotments, particularly in bedding and other congregation areas such as corrals. Other land uses also contribute to compaction and accelerated erosion both on a localized scale and on a broader scale. Indirectly, casual and organized OHV use, other recreational activities, mining, and other disturbances have the potential to modify soil structure, increase erosion potential, decrease revegetation potential, and adversely affect biological soil crusts.

Impacts to soils from sheep can be noticeable in camp and bedding areas, but due to the short-term nature of these uses, they do not contribute to long-term impacts unless other, more substantial and continuous disturbances are also occurring. In this allotment, OHV activities may result in substantial increases in erosion potential and soil compaction in heavily used areas and on the route network. In the East Unit (within the OHV Open Area) and the Middle Unit (west of I-15), removal of sheep grazing would not substantially improve soil conditions, because their relative contribution to compaction and erosion potential is small. These impacts are generally low to moderate over broad areas away from the OHV Open Areas, and do not result in cumulative adverse effects over the long-term.

Off-route impacts from OHV use to biological soil crusts which can result in the burial of those crusts—including when soil moisture is low—may have fairly substantial effects on the sustainability of sensitive biological soil crust populations within portions of the allotment. Rehabilitation of soil productivity can be enhanced through decompaction of soils in heavily used areas and providing microclimates for plant seedlings, thereby decreasing erosion potential over the long-term. Sheep also contribute to cumulative effects to biological soil crusts through hoof action, but the relative contribution of sheep grazing as compared with recreational use is small.

The designation of routes will reduce cumulative impacts to soils. Particularly positive is the impact reduction that occurs from the closure of substantial mileage of routes. Rehabilitated areas are improved by reduced erosion and elimination of compaction, and additional areas that are no longer readily accessible by vehicle are improved.

5. Cultural Resources

Most known sites have been adversely affected because of either natural weathering or vandalism. Vandalized sites include cultural resources that have been removed, scratched with hard sharp rock, or had modern graffiti added to obscure the prehistoric or historic cultural values, and sites on the ground that have experienced substantial damage from OHV use off of designated routes. . In sheep allotments, impacts could include surface displacement or hoof action on subsurface midden areas.

Approximately 10% of the known sites are found in active allotments and these sites have been subject to grazing for many years without documented damage. Impacts from sheep grazing and the proposed grazing permit renewal are not expected to add any further adverse impact to known sites. Sites with documented damage from sheep grazing would be fenced or otherwise protected until their importance can be determined, and appropriate mitigation, such as data recovery performed on valuable sites. The combined impact would be insignificant, both incrementally and cumulatively, because BLM will implement procedures to protect any affected resources in accordance with amended 2004 State Protocol Agreement to insure compliance with section 106 of the National Historic Preservation Act.

6. Environmental Justice

There is not a lot of information on the Basque community, but based on available sources, there have been cumulative impacts on this small ethnic community from past, present and reasonably foreseeable activities to limit sheep grazing in Southern California. This is because a substantial segment of this ethnic group has historically and continues to participate in the sheep-grazing industry in Southern California and throughout the west. Southern California is the home of the largest Basque community—about 20,000 people or 37% of the total number of Basque in the nation as of 1990. Between 5 and 10 percent of this community is believed to be involved in some aspect of sheep grazing, and sheep grazing is one of three primary industries in which American Basques participate.

Adoption of the proposed action and resumption of sheep grazing on 16,889 acres of public lands in the Stoddard Mountain allotment during higher forage-production years has a relatively small adverse impact to this community, when compared to the No Action

alternative which would permit sheep grazing on 107,087 acres. However, some level of continued sheep grazing here and in other ephemeral allotments identified in the WMP would assure that some income and job opportunities from sheep grazing continue to be available to members of this small ethnic group in Southern California.

As with other American immigrants, as their time in America has increased, Basque participation in the U.S. economy has diversified. Sheep grazing still represents a link for this group to their cultural heritage and a way of life that substantially contributed to establishing their Southern California roots. The no grazing alternative would not contribute to providing this continued opportunity, and taken together with past and reasonably foreseeable actions to limit sheep grazing in Southern California, could have a substantial effect on this community.

7. Recreation

Recreational use and access would not be substantially adversely affected by sheep-grazing activities because grazing activities would not occur within the OHV Open Area under the Proposed Action, and even under the No Action alternative, do not occur within the most popular portion of the OHV Open Area or during very busy weekends. Historically, sheep grazing has not affected overall recreational opportunities either within or outside of the Open Area, and has not been a source of perceived or documented conflict in the past. Sightings of sheep are relatively infrequent, impacts from viewing sheep are relatively subjective, and any past, present and reasonably foreseeable cumulative effects from the proposed action on recreation are anticipated to be nominal.

8. Social and Economic Values

There would not be substantive cumulative impacts to the local or regional economy of San Bernardino County from the implementation of any of the alternatives. Farming and ranching in the West Mojave region continue to decrease in land area, numbers of operations, and numbers of animals, regardless of these lease renewals or non-renewals. These downward trends are anticipated to continue in San Bernardino County as in most parts of the country, and are the result of downward pressures on production costs of agricultural products as farm production increases in other parts of the world, as well as regional upward pressures for non-rural development activities for residential and commercial enterprises. The past, present, or future gross domestic product contributions of these operations to the local or regional economy are nominal and are expected to continue to decrease as a percent of the total regional economy.

In conjunction with the increasing non-rural development of the region, OHV use has been steadily increasing over the past 10 years. This use is anticipated to further increase in the Stoddard Mountain Allotment and surrounding areas, as urban development in the Helendale, Hinkley, Apple Valley and surrounding Victor Valley areas continues. Local private-property owners within and adjacent to the allotment boundaries have expressed concerns about how OHV use may affect their private property, as well as the cumulative effects of rangeland management activities, increasing residential use, and related recreational use in the area.

CHAPTER 5: CONSULTATION AND COORDINATION

A. Participating Staff

Remijio Chavez	Rangeland Mgmt. Specialist
Charles Sullivan	Natural Resource Specialist
Jim Shearer	Archaeologist
Edy Seehafer	Environmental Coordinator

B. Consultation

Consultation would continue with the affected grazing lessee, interested publics, County governments, and affected Native American tribes having traditional ties to lands within the allotment.

MAPS - Stoddard Mountain Allotment

Map 1 – Current Stoddard Grazing Allotment Overview
Map 2 – Stoddard Grazing Allotment, Middle Unit
Map 3 – Stoddard Grazing Allotment, WMP Special Area Boundaries
Map 4 – Stoddard Grazing Allotment, Vegetation Communities

Attachments - Stoddard Mountain Allotment

Attachment 1 – Supplemental Procedures for Livestock Grazing Permit/Lease Renewal, A Cultural Resources Amendment to the State Protocol Agreement Between California Bureau of Land Management and The California State Historic Preservation Officer.